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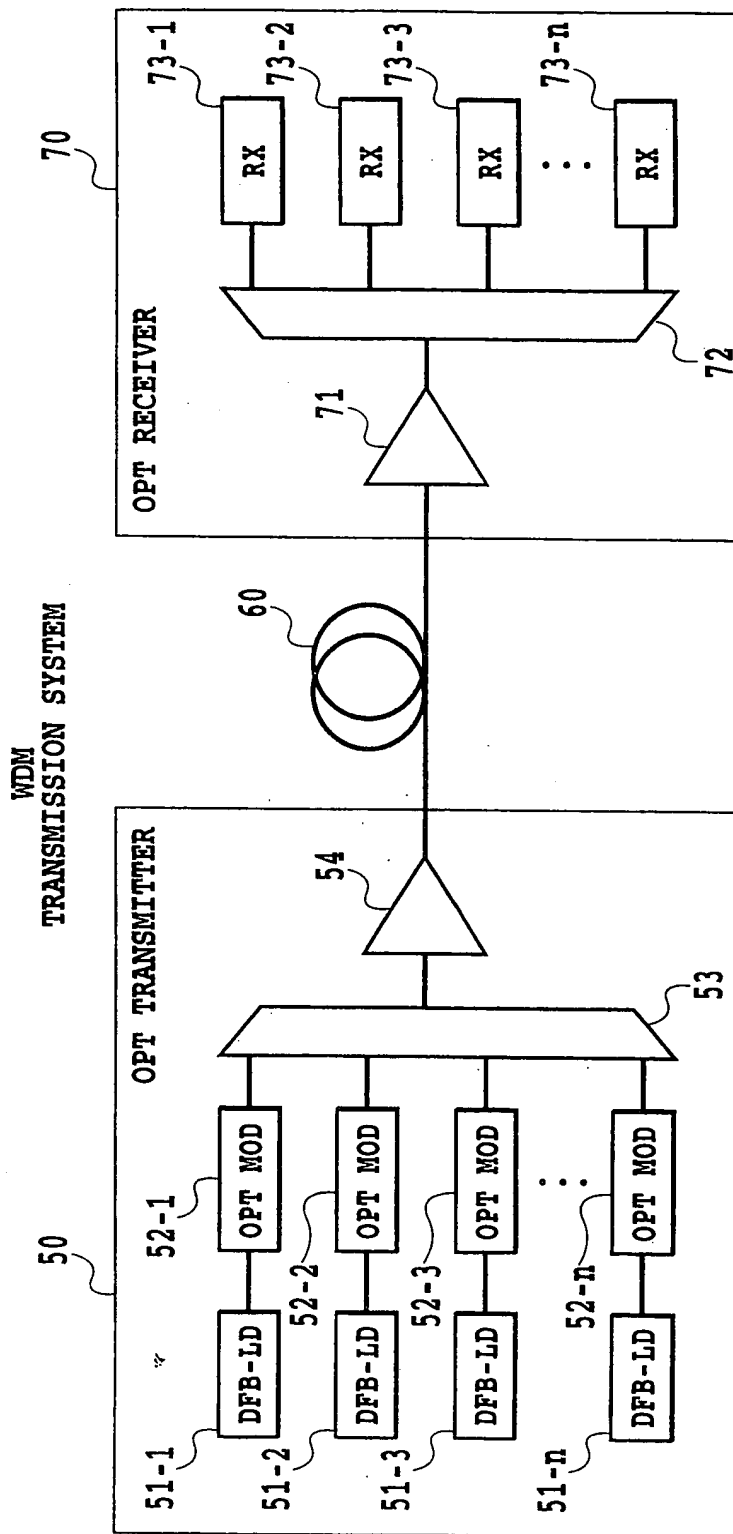


FIG.1
PRIOR ART

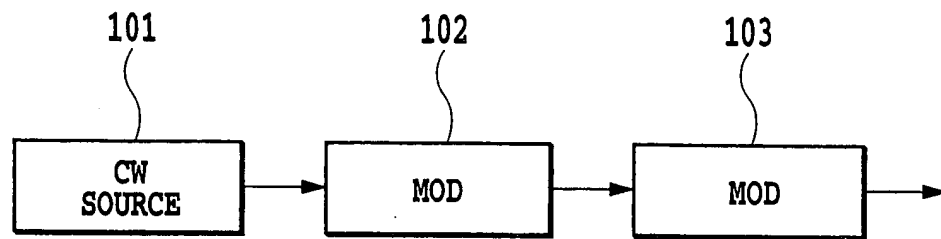
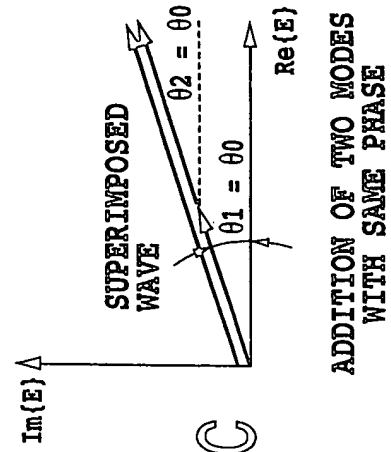
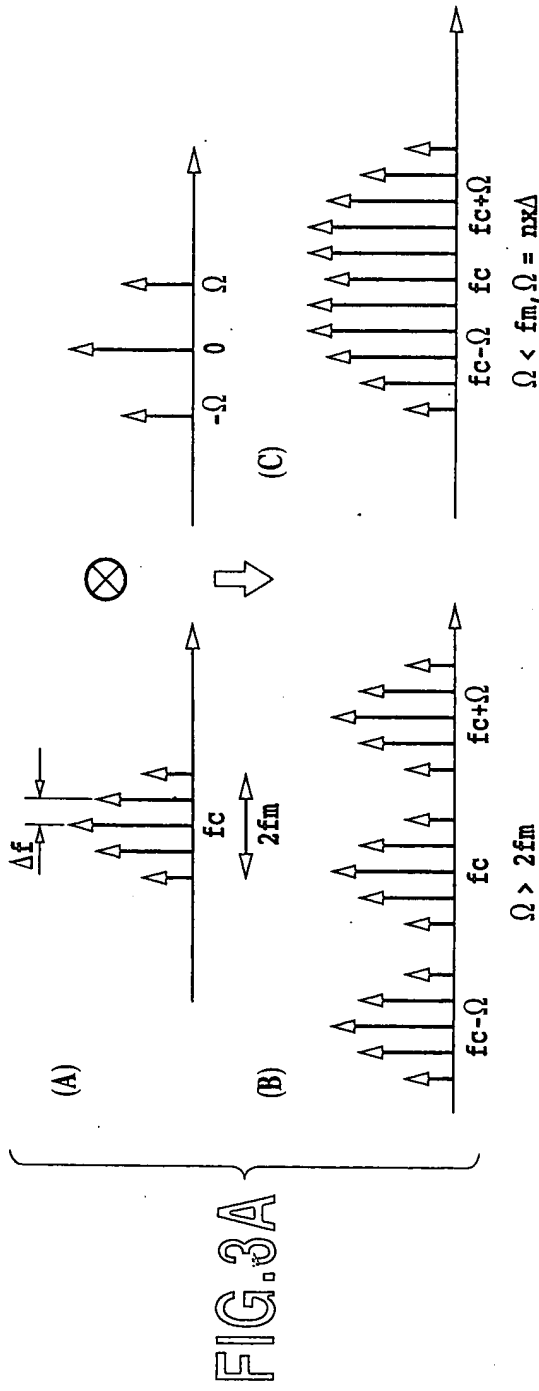
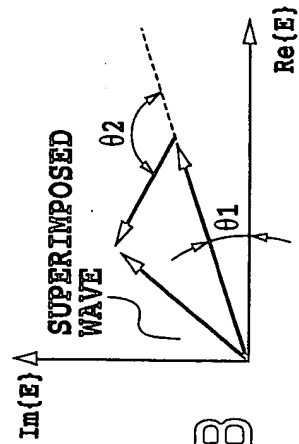


FIG.2



ADDITION OF TWO MODES
WITH DIFFERENT PHASES



ADDITION OF TWO MODES
WITH SAME PHASE

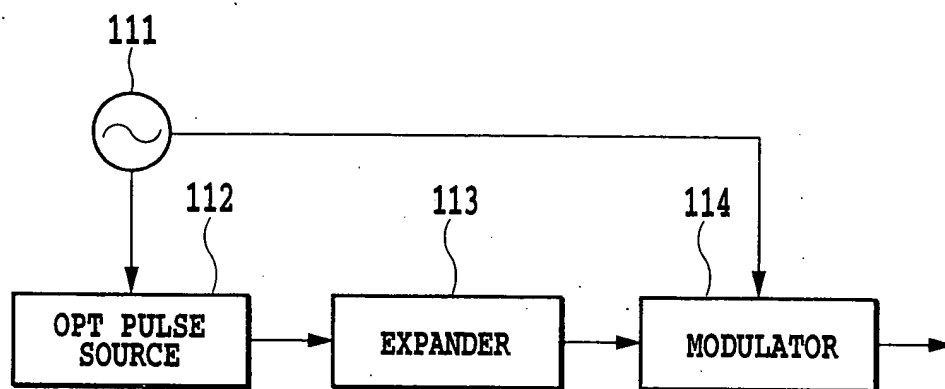


FIG.4

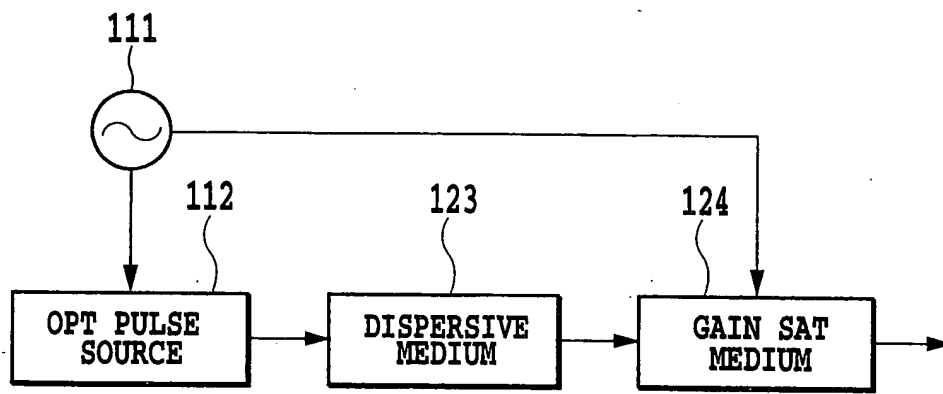


FIG.5

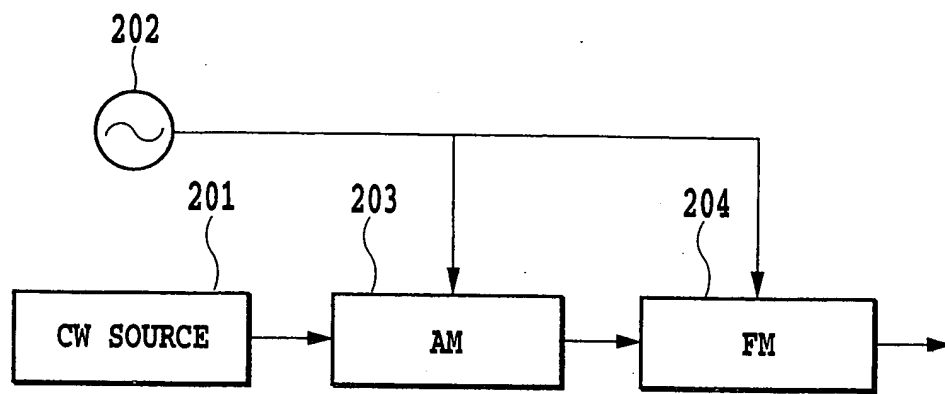


FIG.6

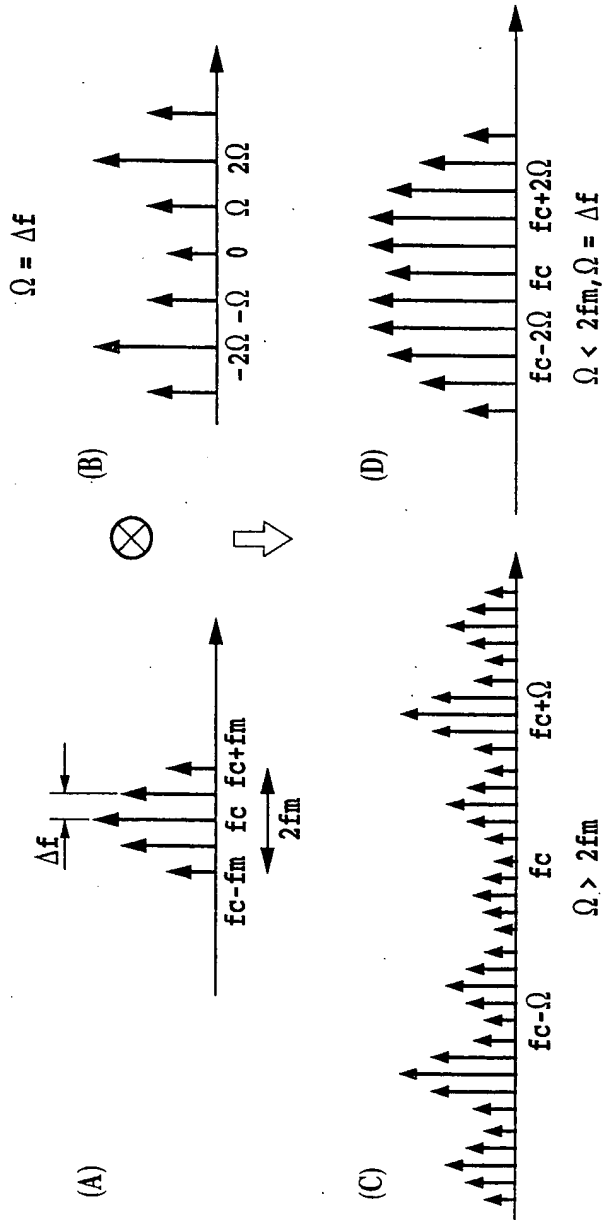


FIG. 7

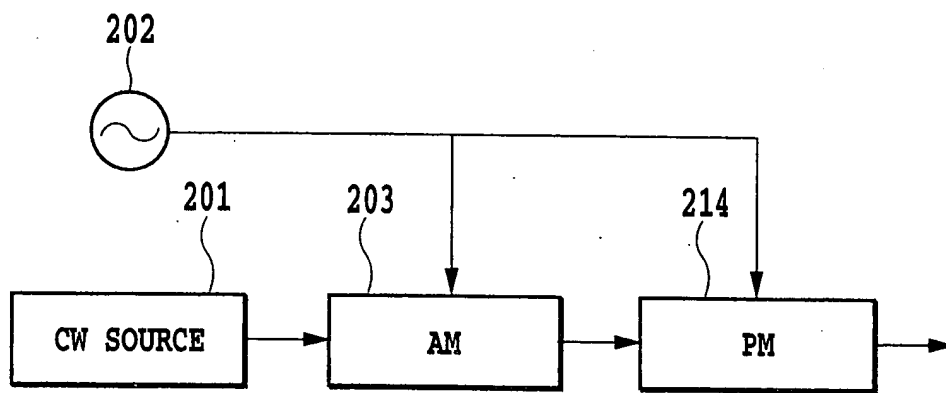


FIG.8

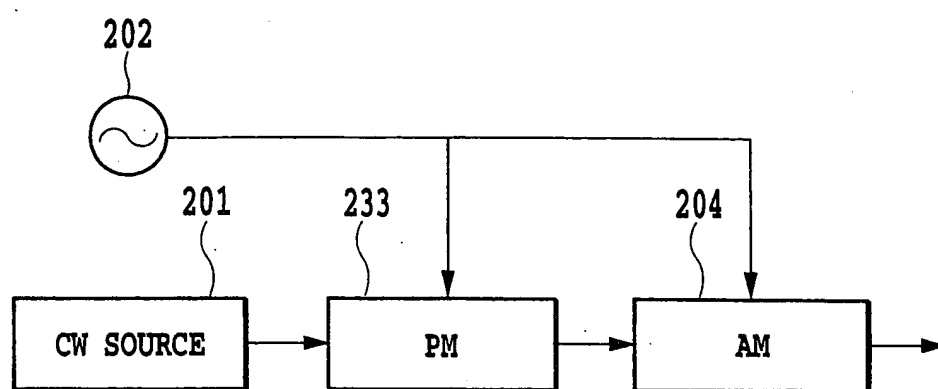


FIG.9

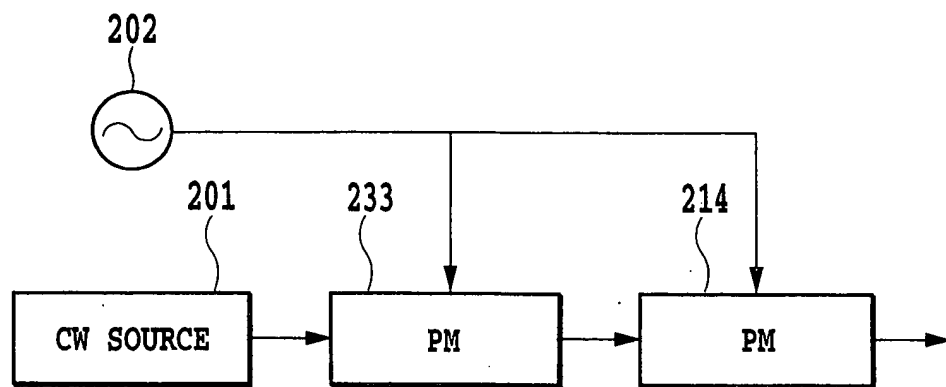


FIG.10

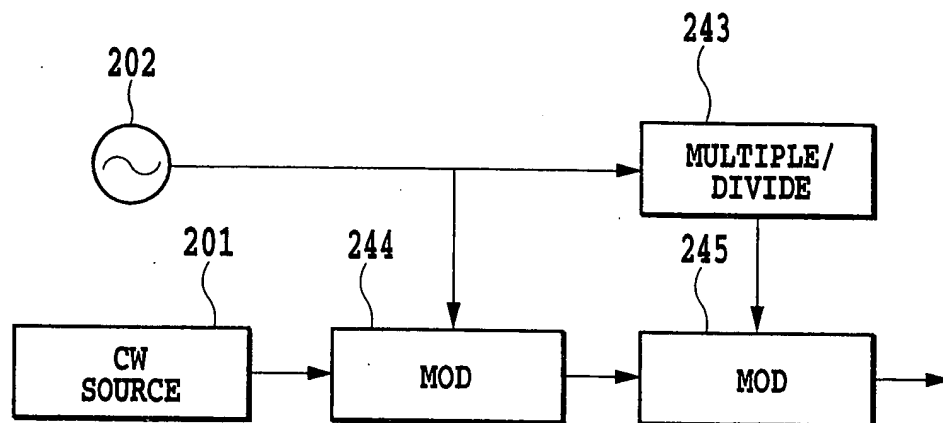


FIG.11

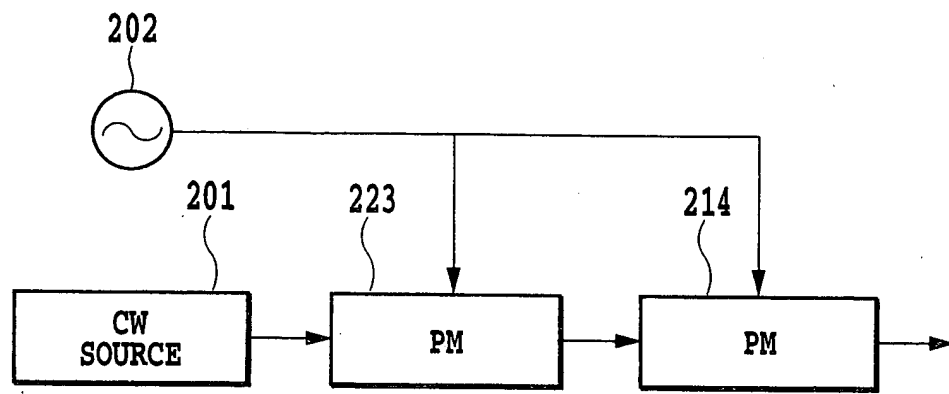


FIG.12

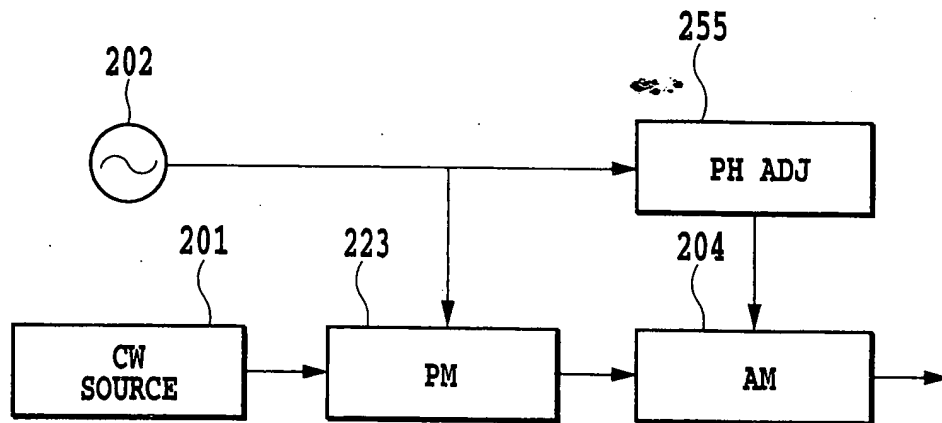


FIG.13

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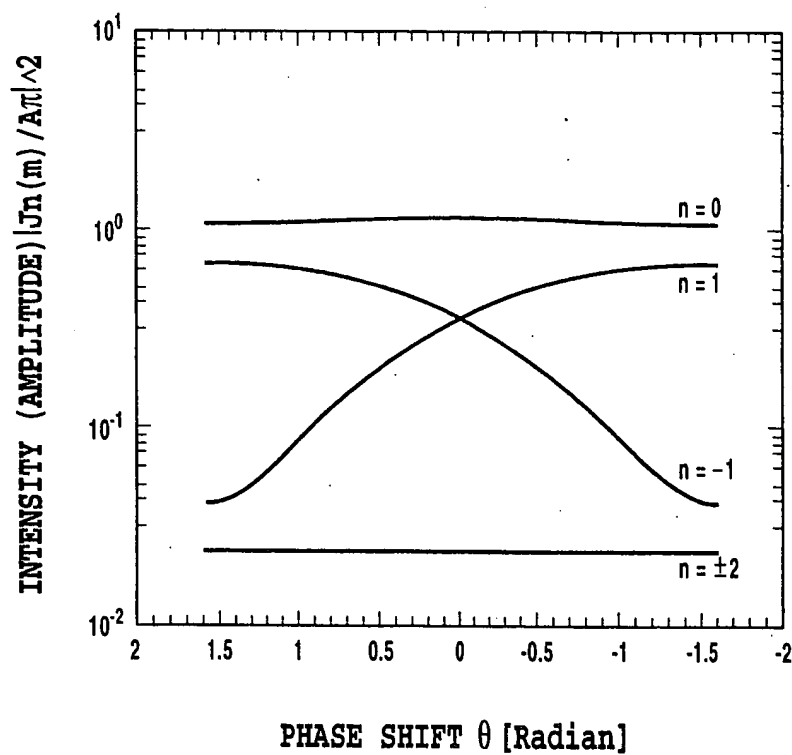
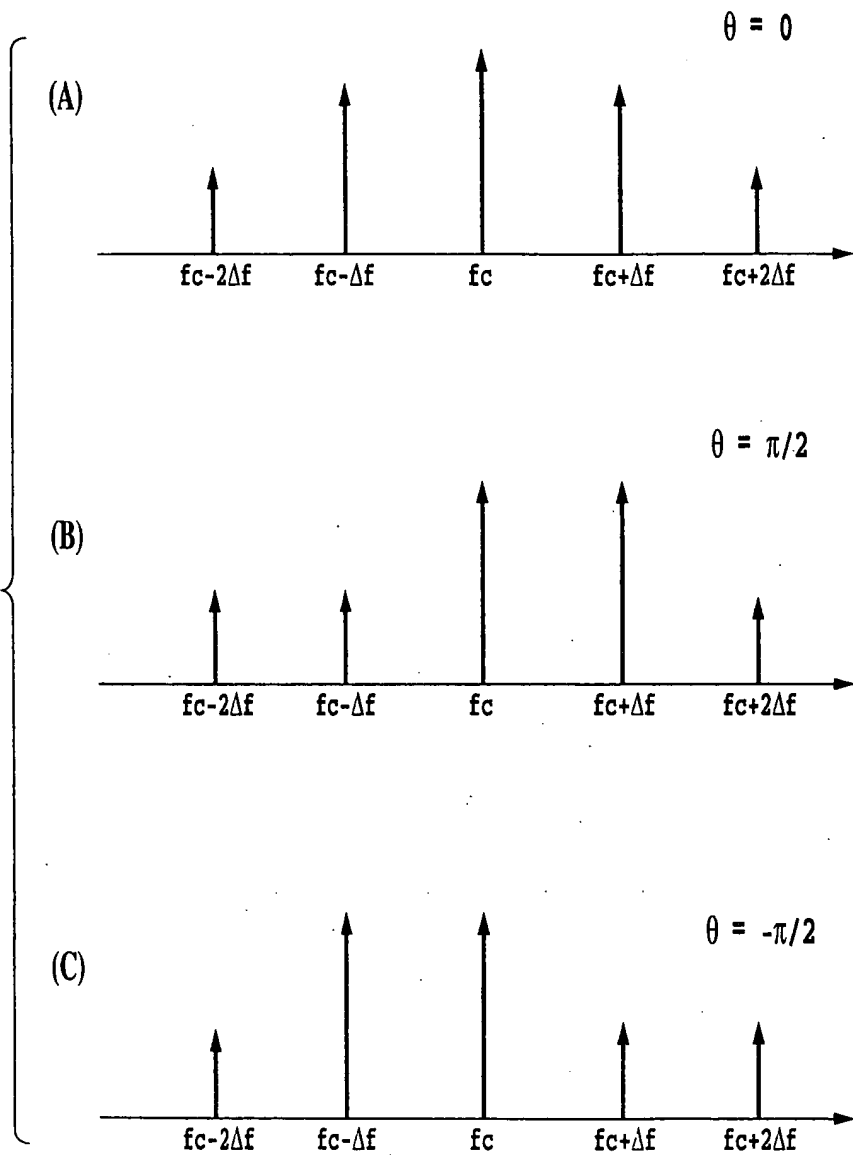


FIG.14

FIG.15



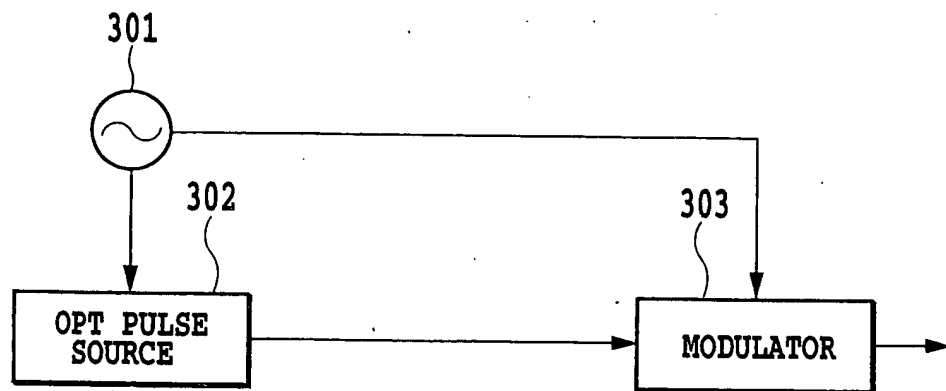


FIG.16

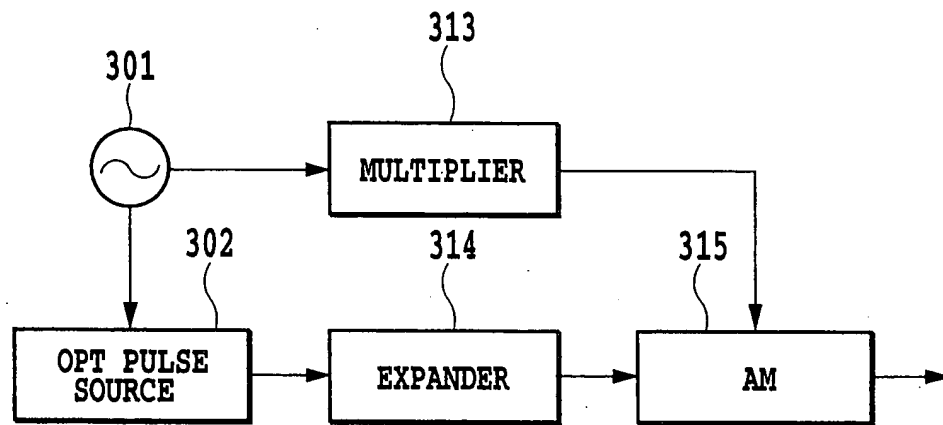


FIG.17

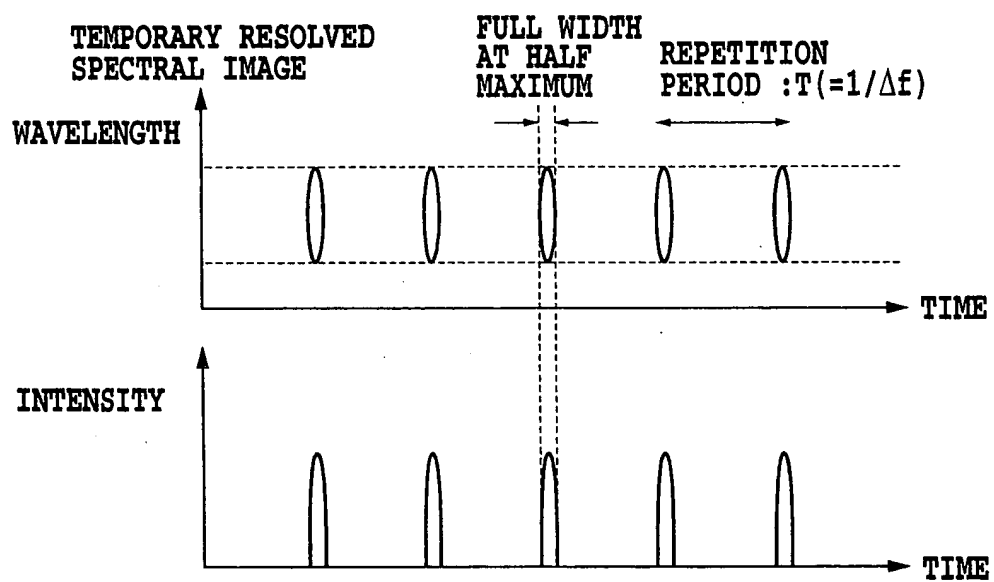


FIG.18

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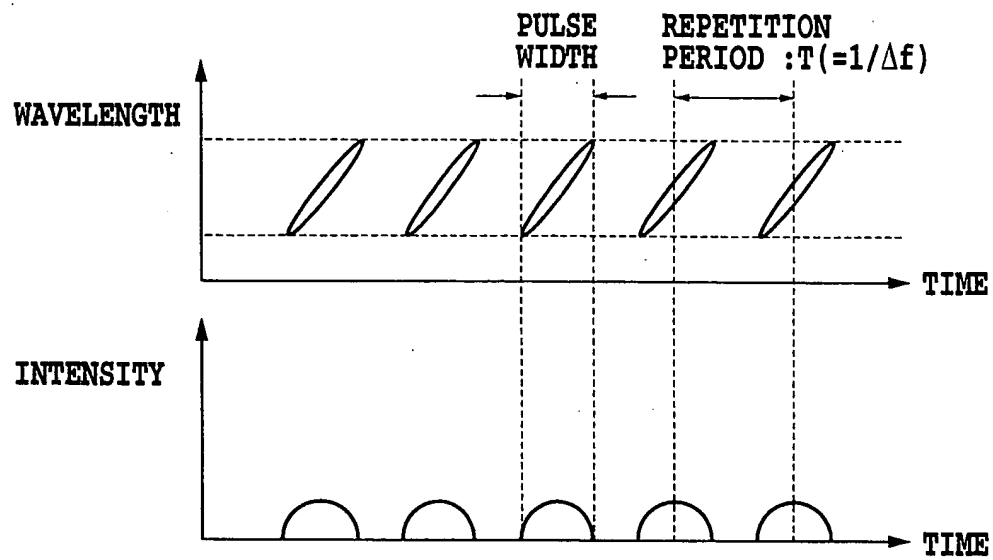


FIG.19

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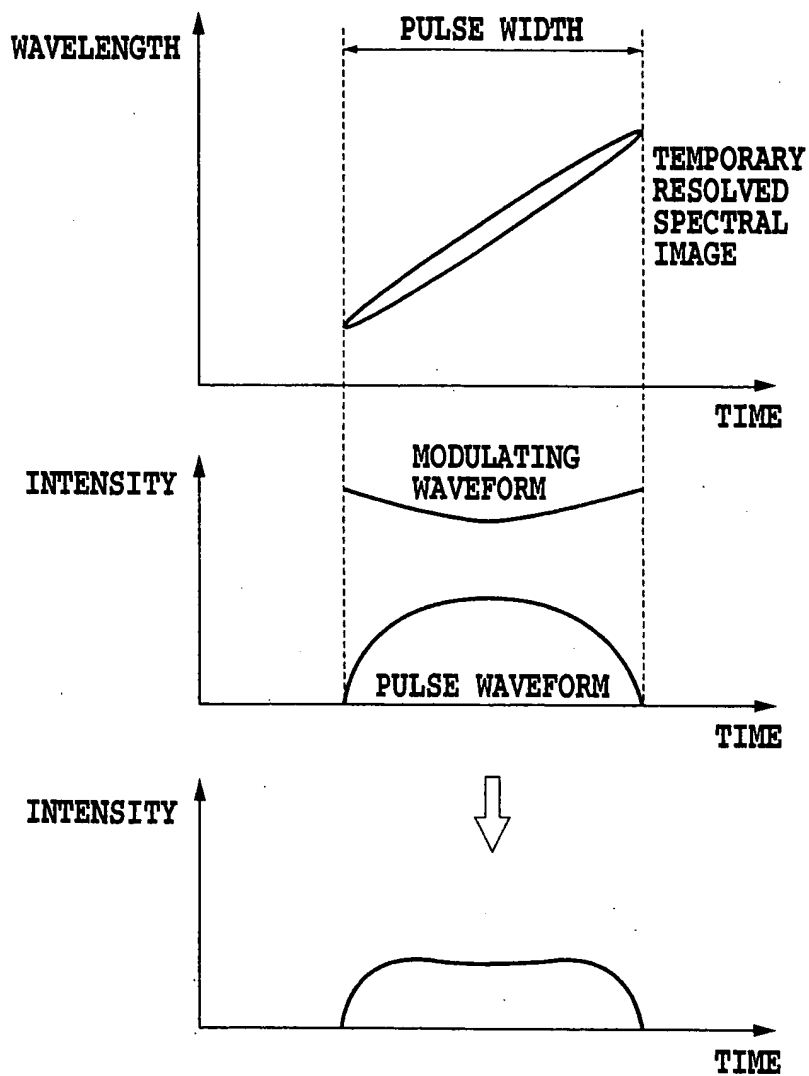


FIG.20

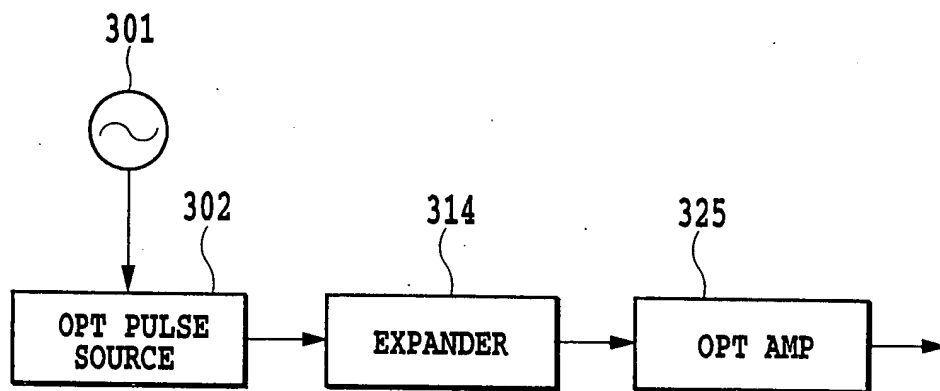


FIG.21

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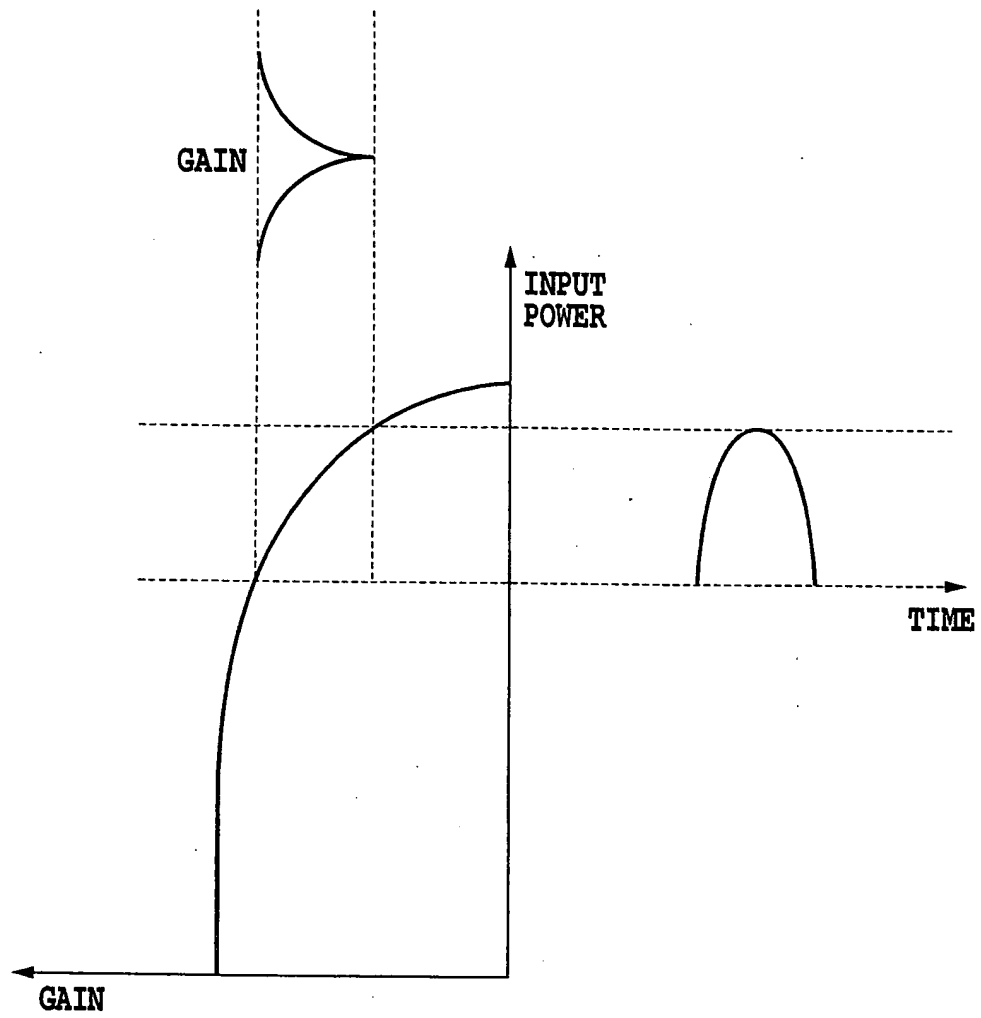


FIG.22

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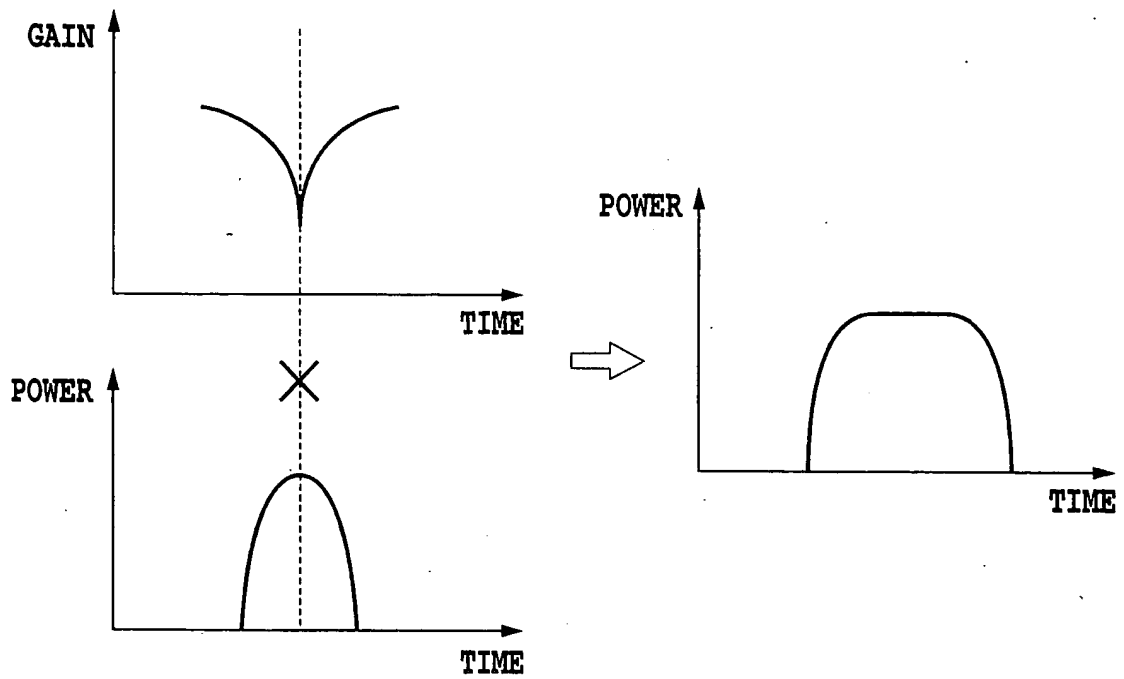


FIG.23

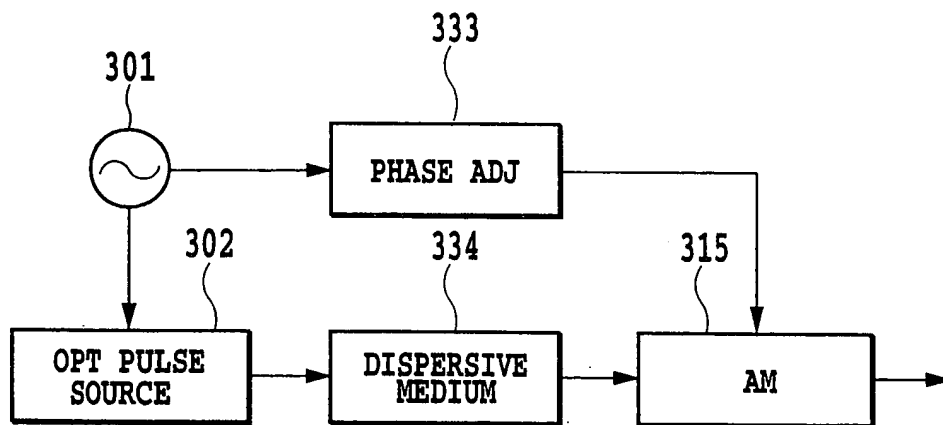


FIG.24

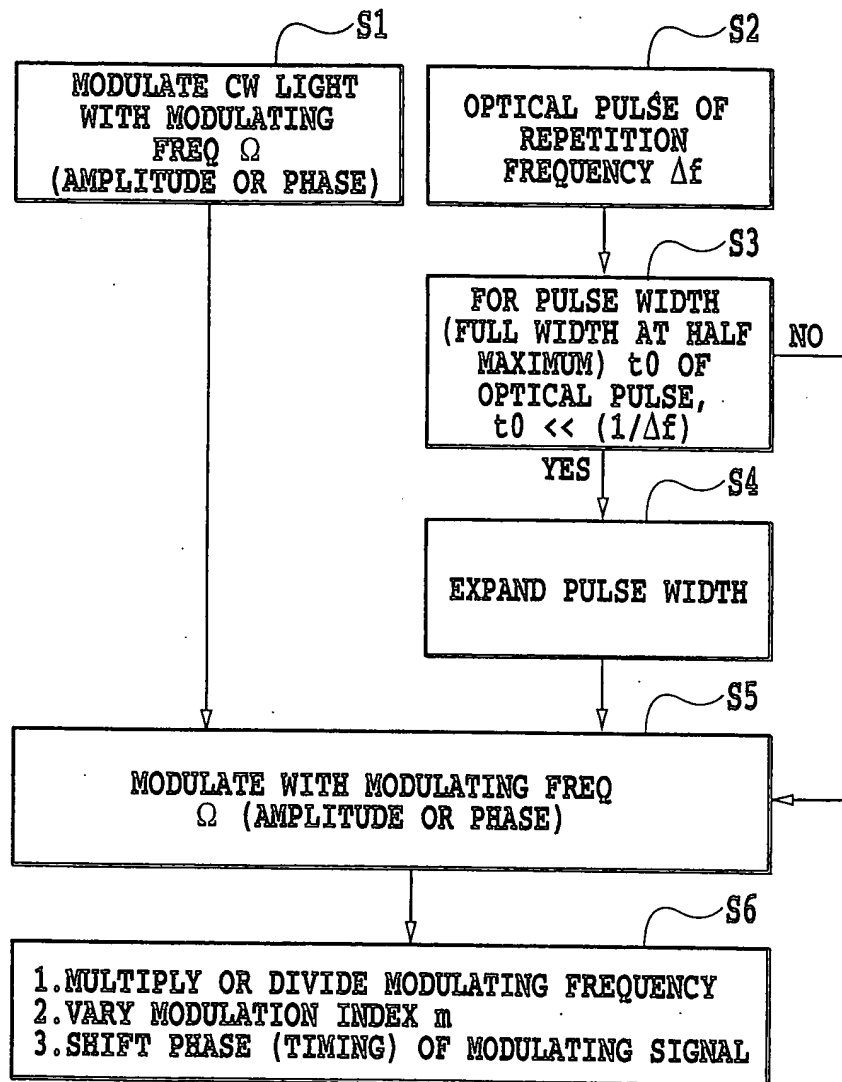
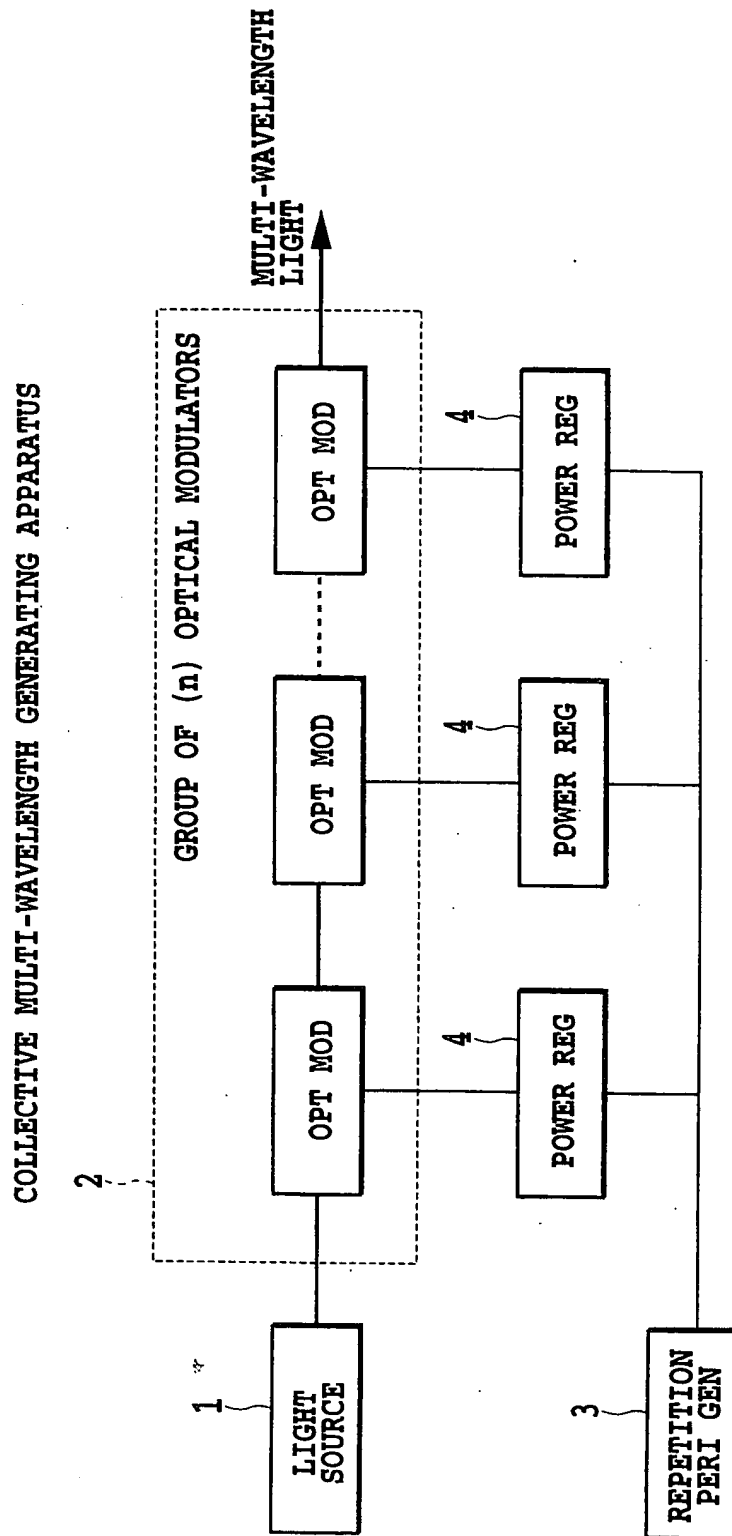


FIG.25

**FIG.26**

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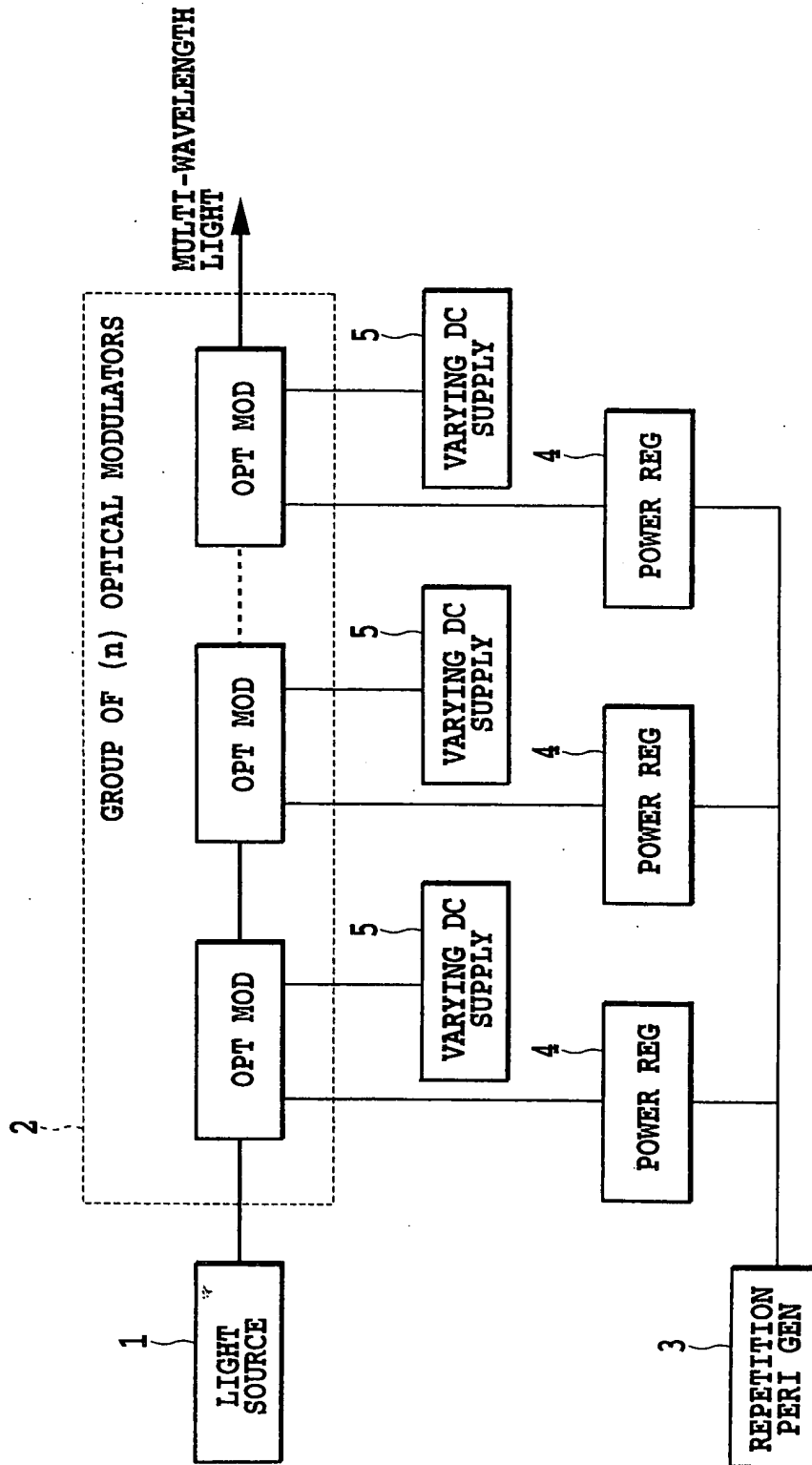


FIG. 27

FLATTENING OPTICAL SPECTRUM BY MULTI-WAVELENGTH GENERATING APPARATUS

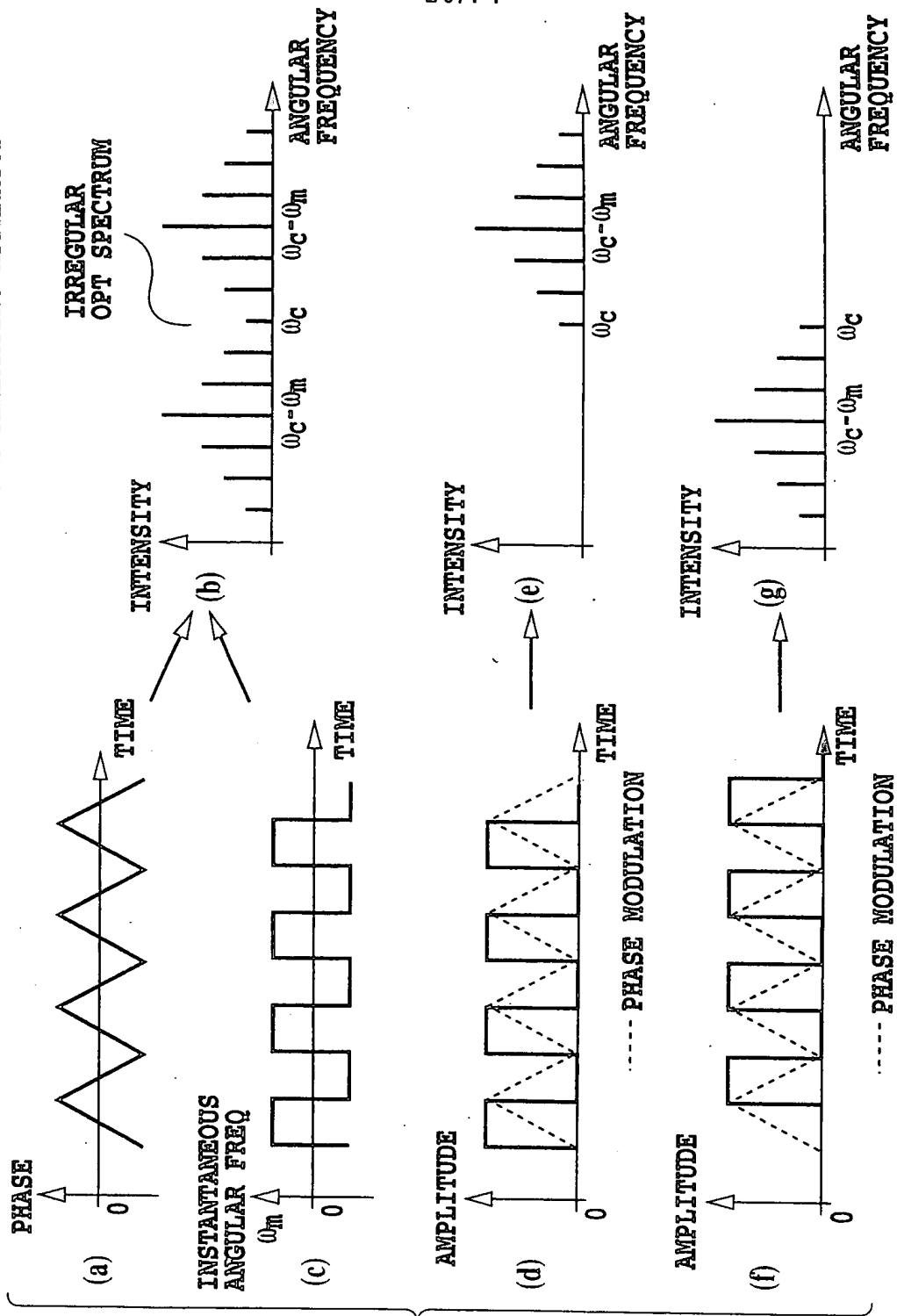
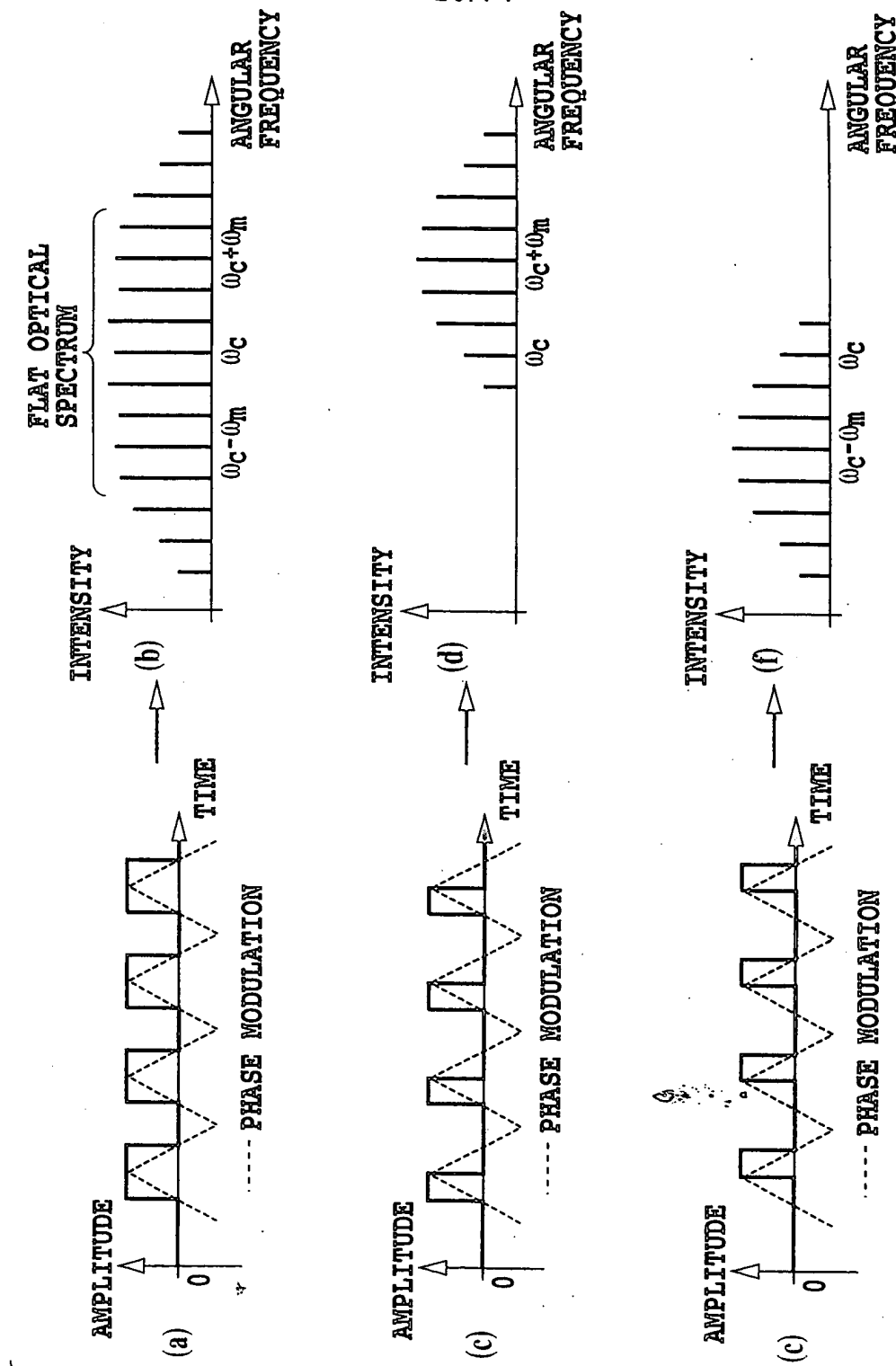


FIG.28

FIG. 29

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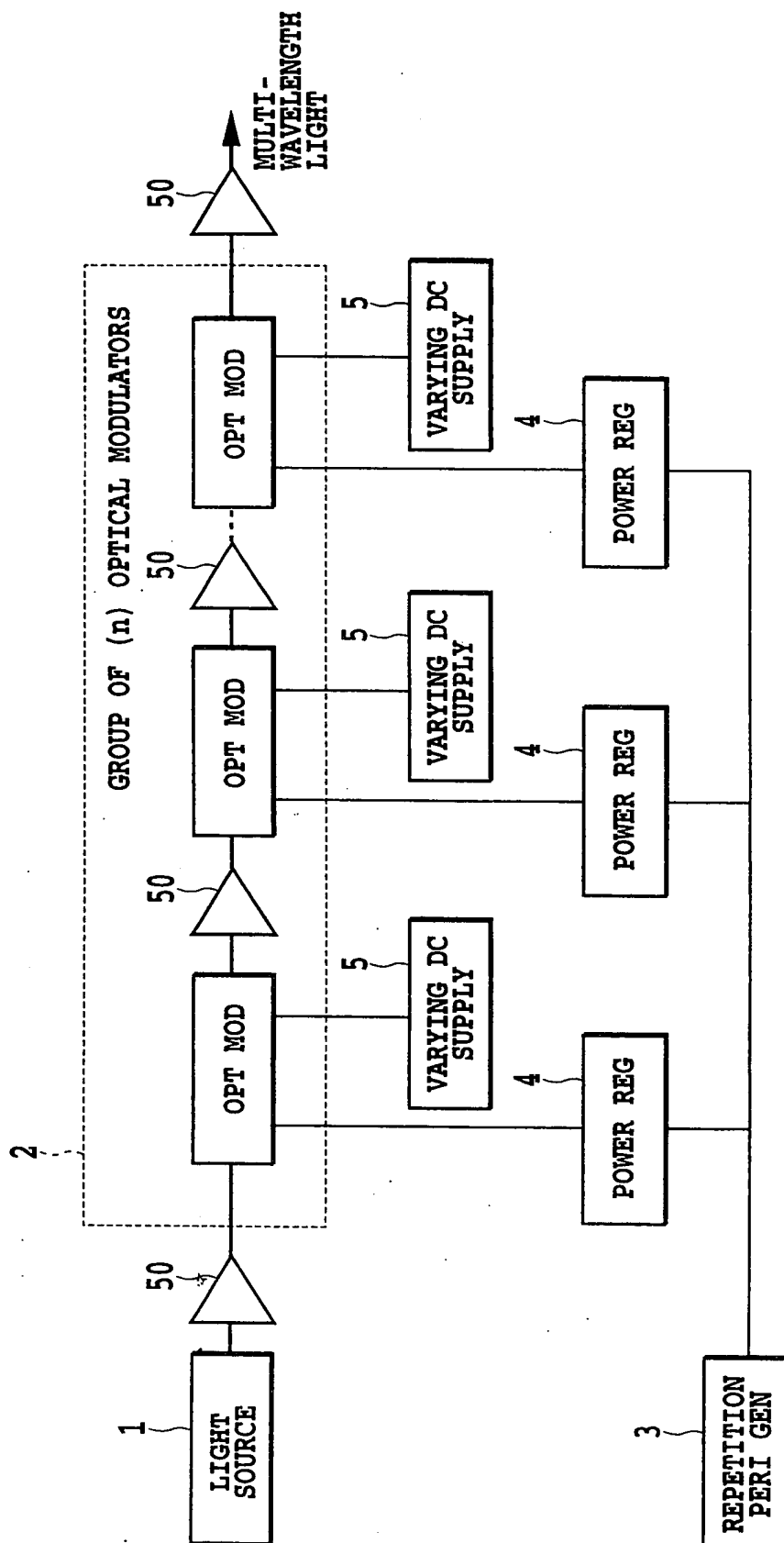


FIG.30

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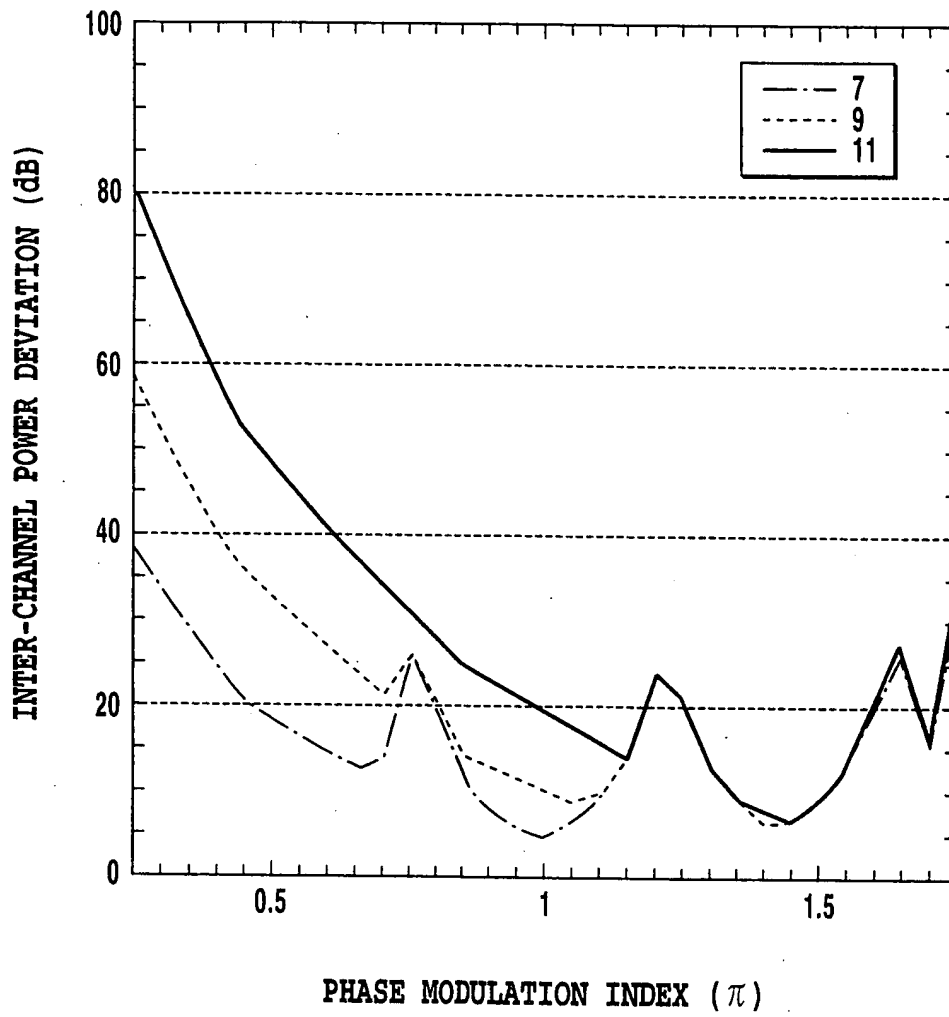
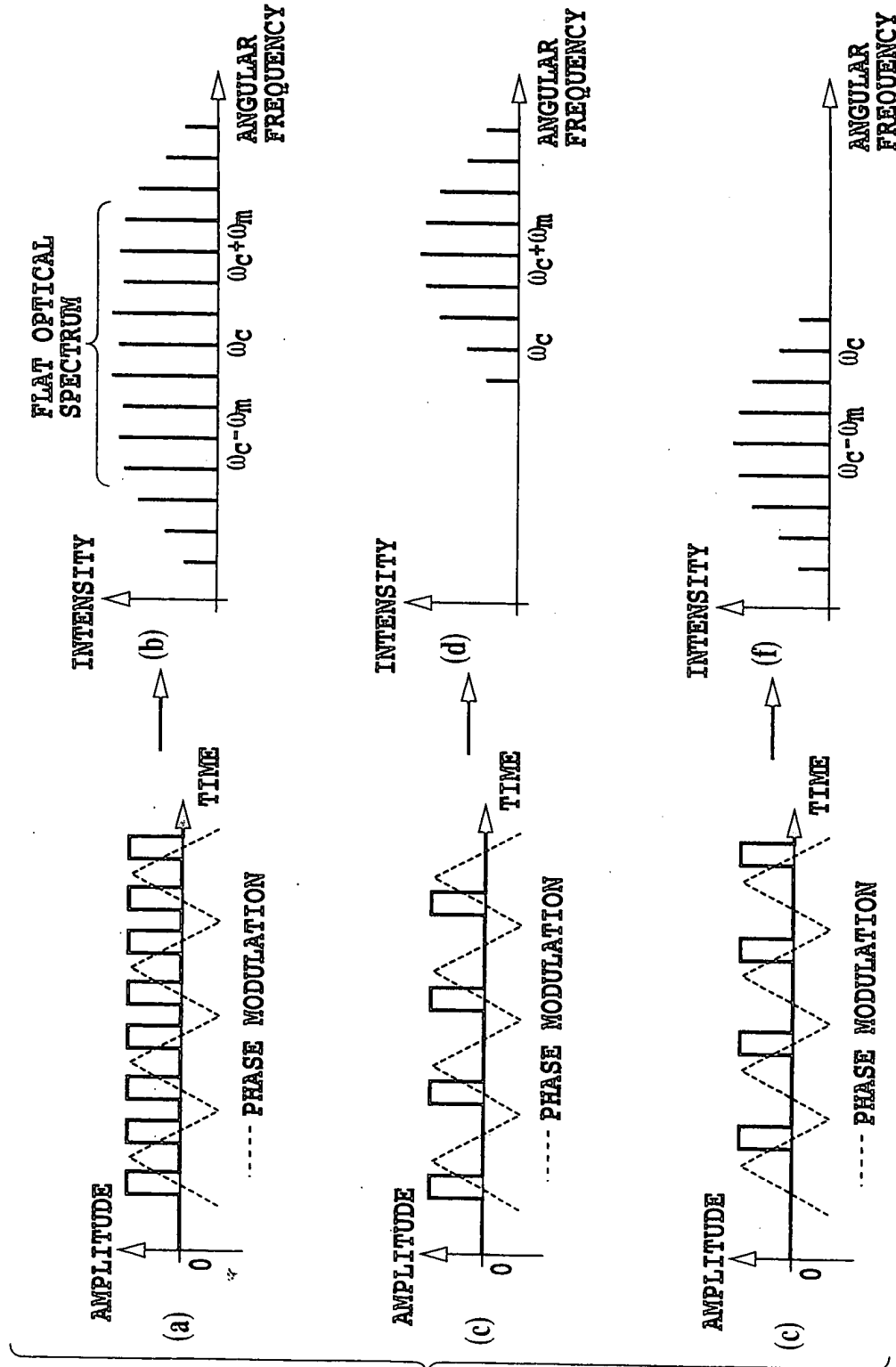


FIG.31

FIG. 32

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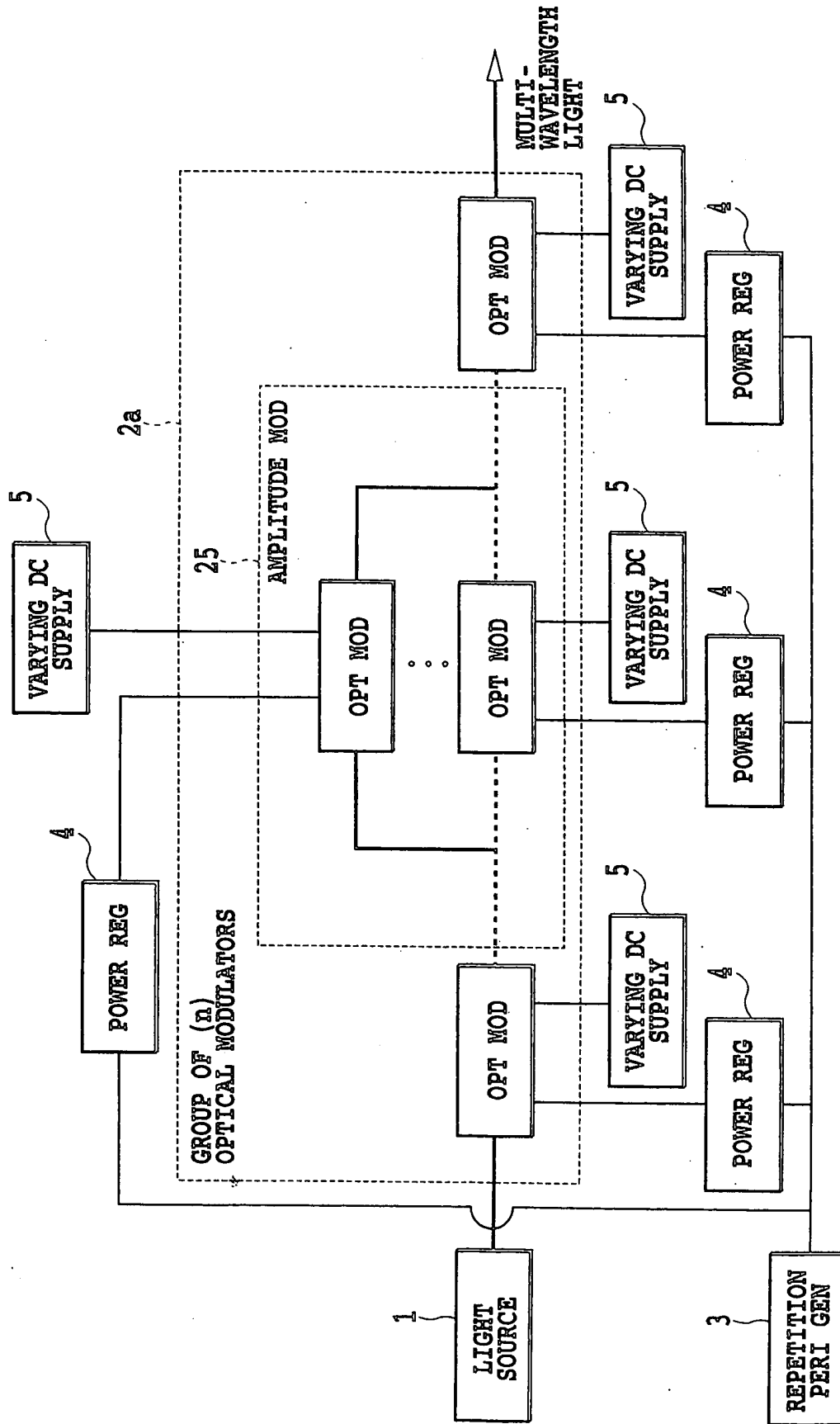


FIG. 33

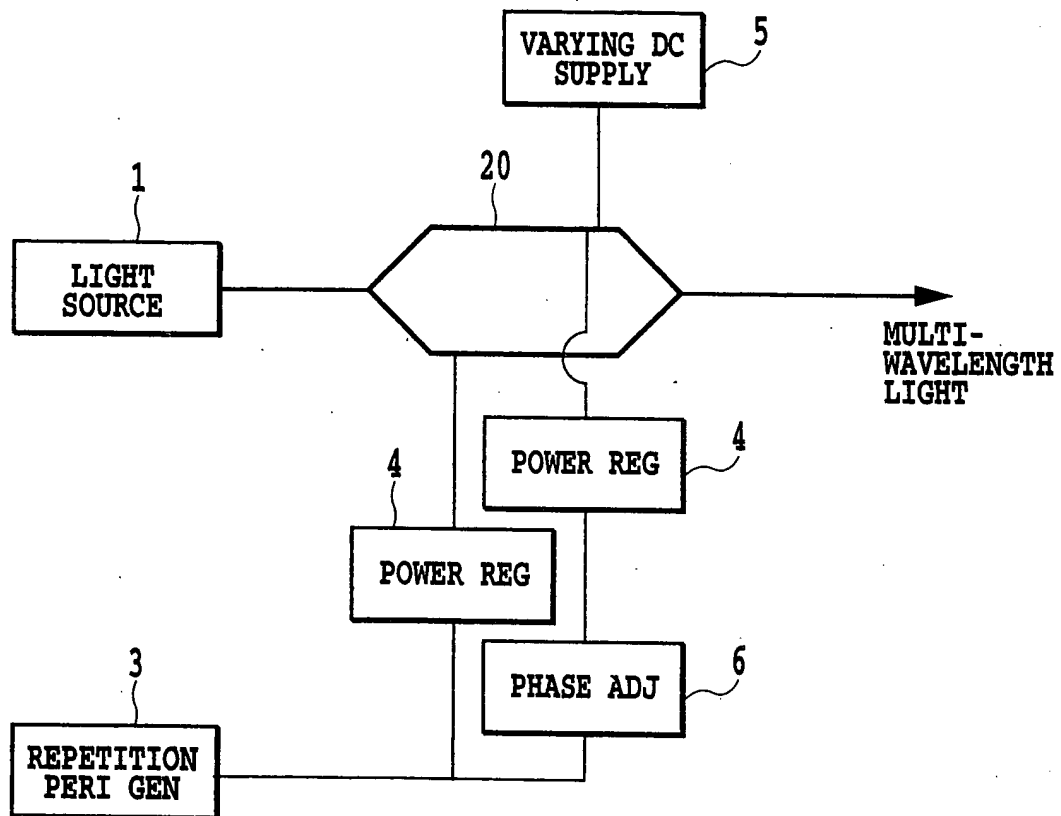


FIG.34

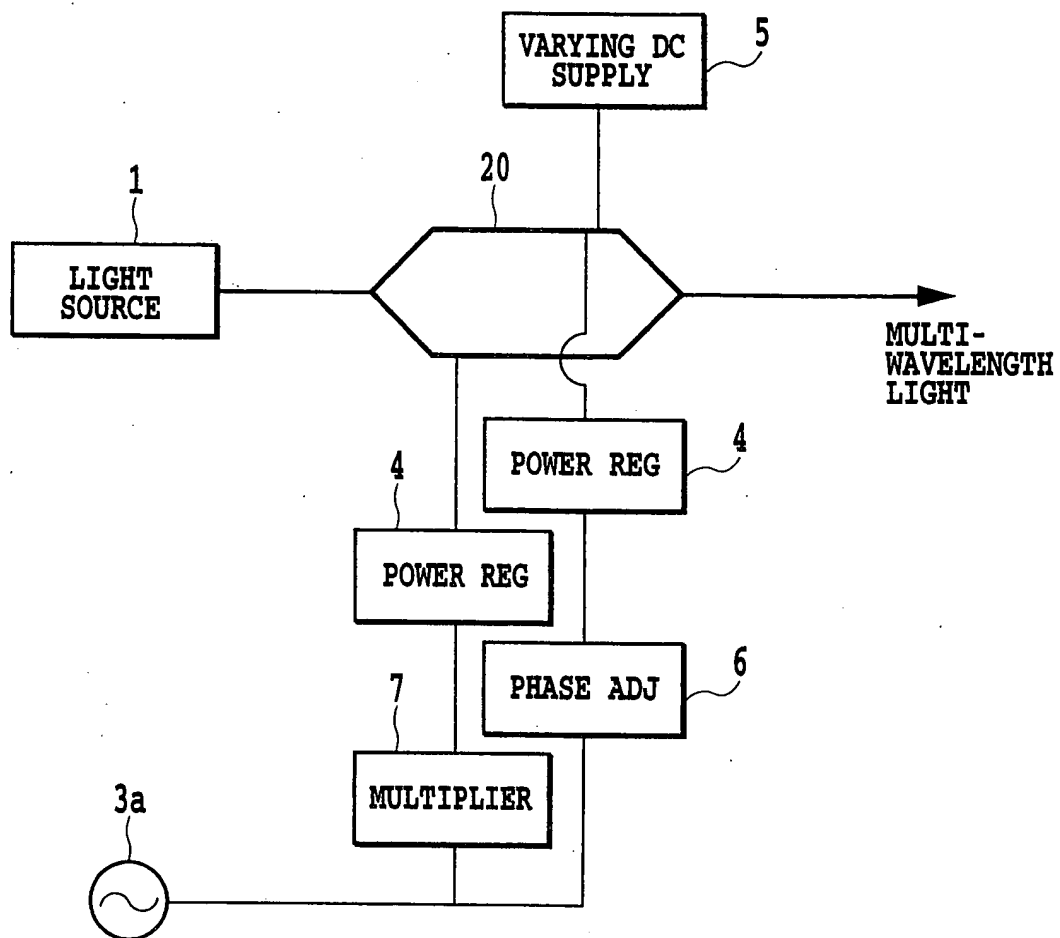


FIG.35

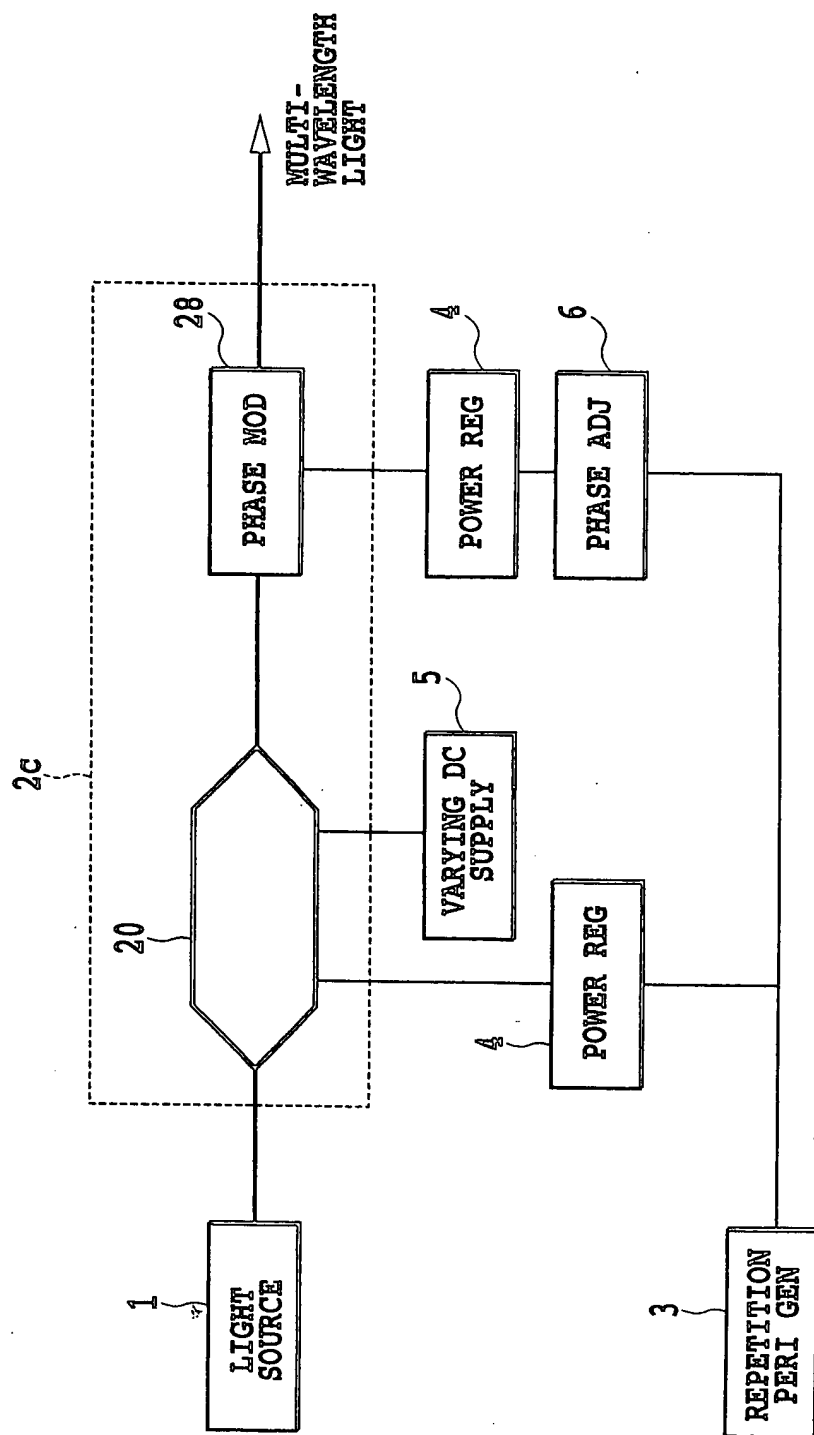


FIG.36

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EXPERIMENTAL RESULT USING WACH-ZEHNDER

2000 Apr 04 15:30

A:FIX /BLK

B:WRITE /BLK

C:FIX /BLK

▽:192.682THz -14.31dBm ▽-▽n:

▽

▽

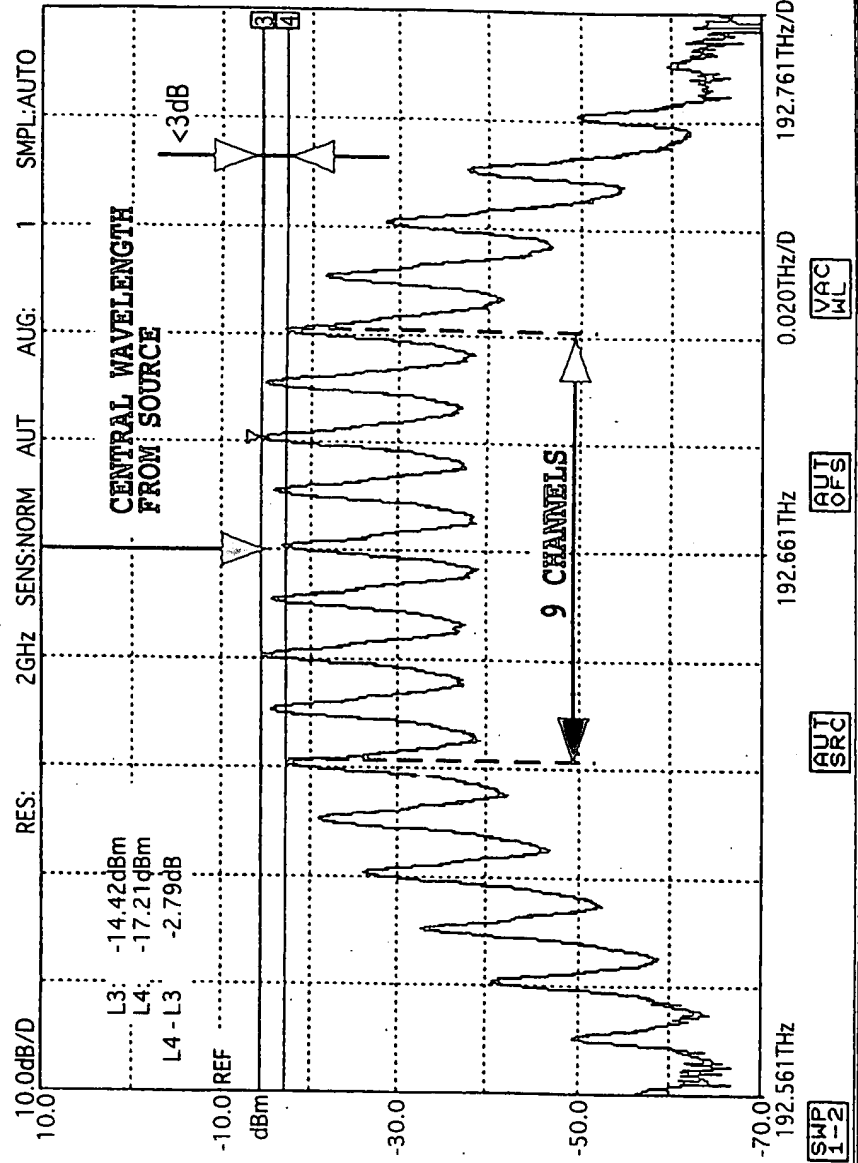


FIG.37

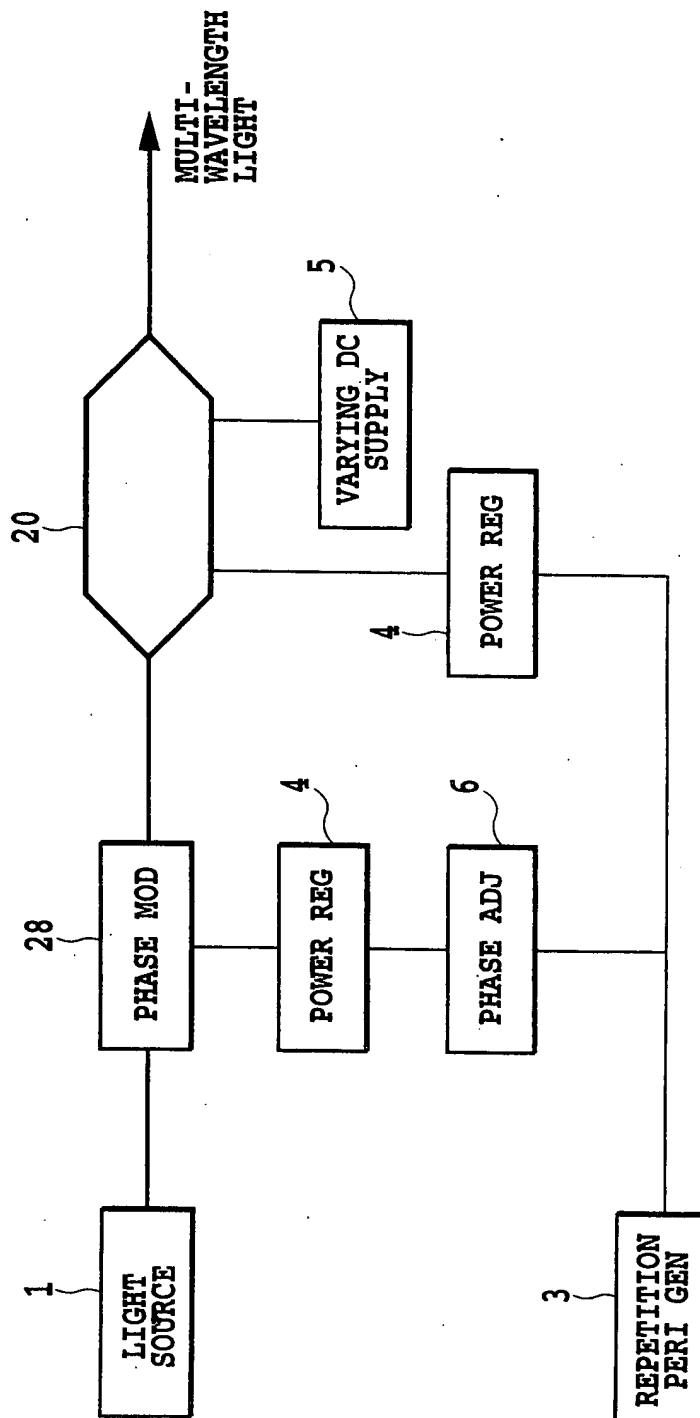


FIG.38

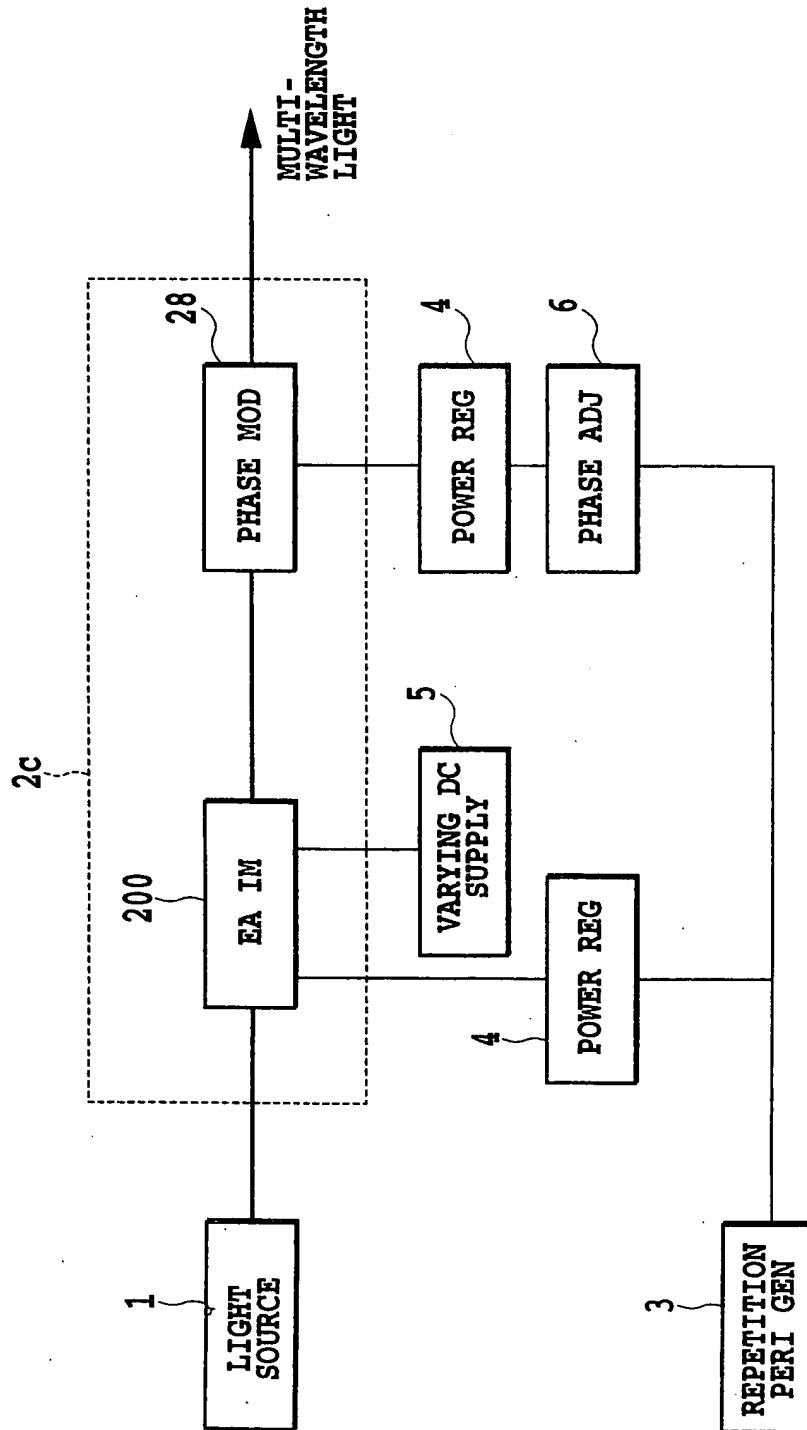


FIG.39

EXPERIMENTAL RESULT USING EA IM

2000 Apr 07 14:33

☐ 192.776THz -17.13dBm ▽ - ▽ n:
☐ A:FIX /BLK
☒ B:WRITE /DSF
☐ C:FIX /BLK

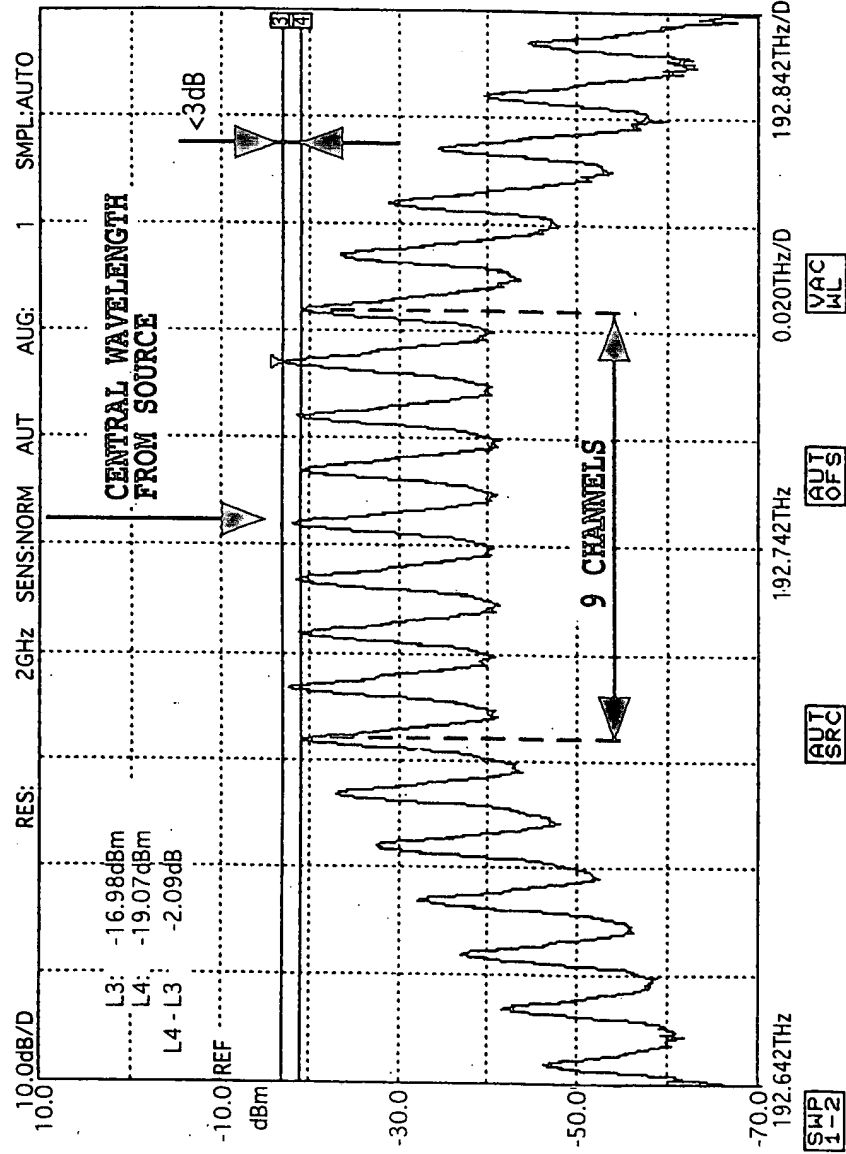


FIG.40

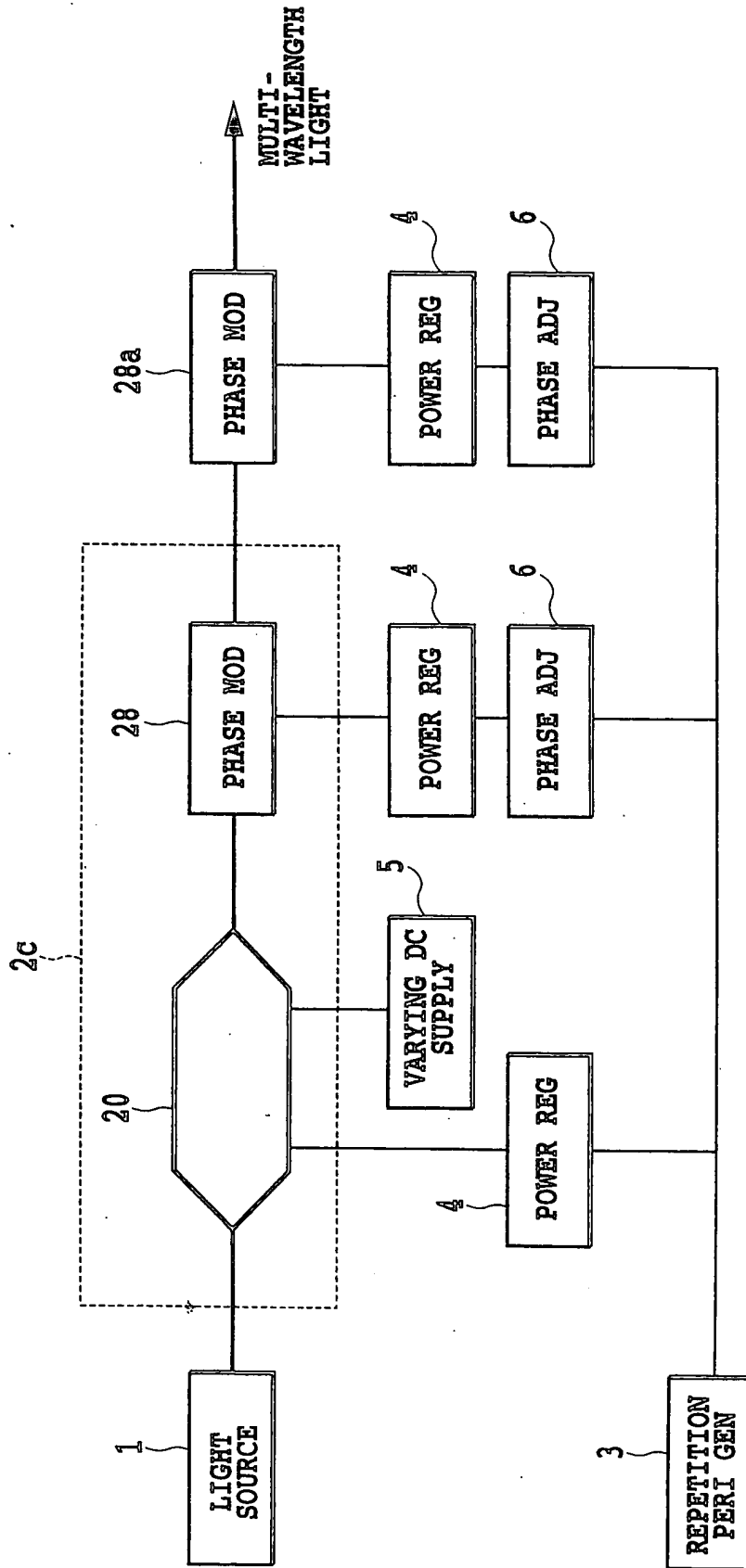


FIG. 41

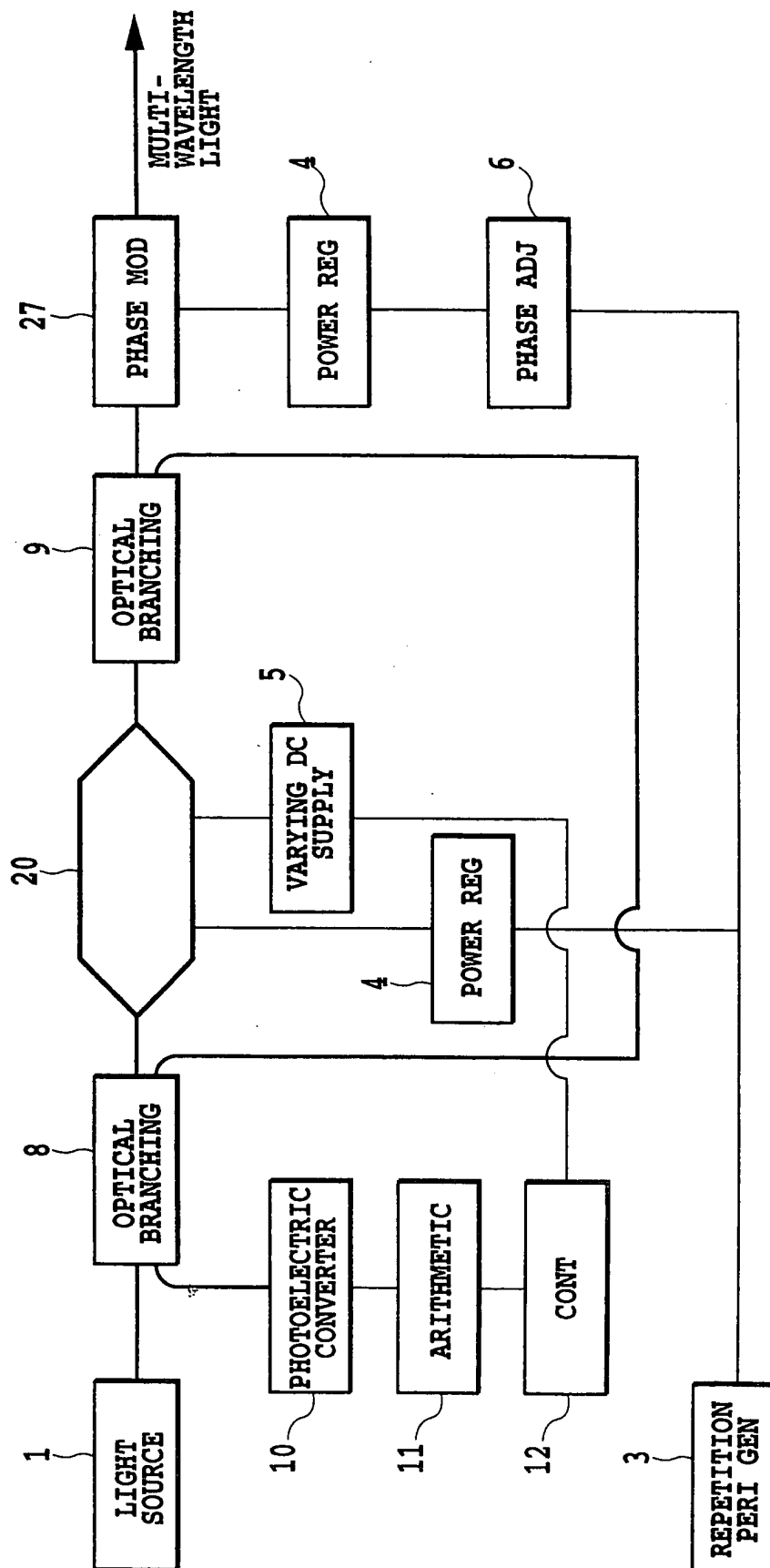


FIG.42

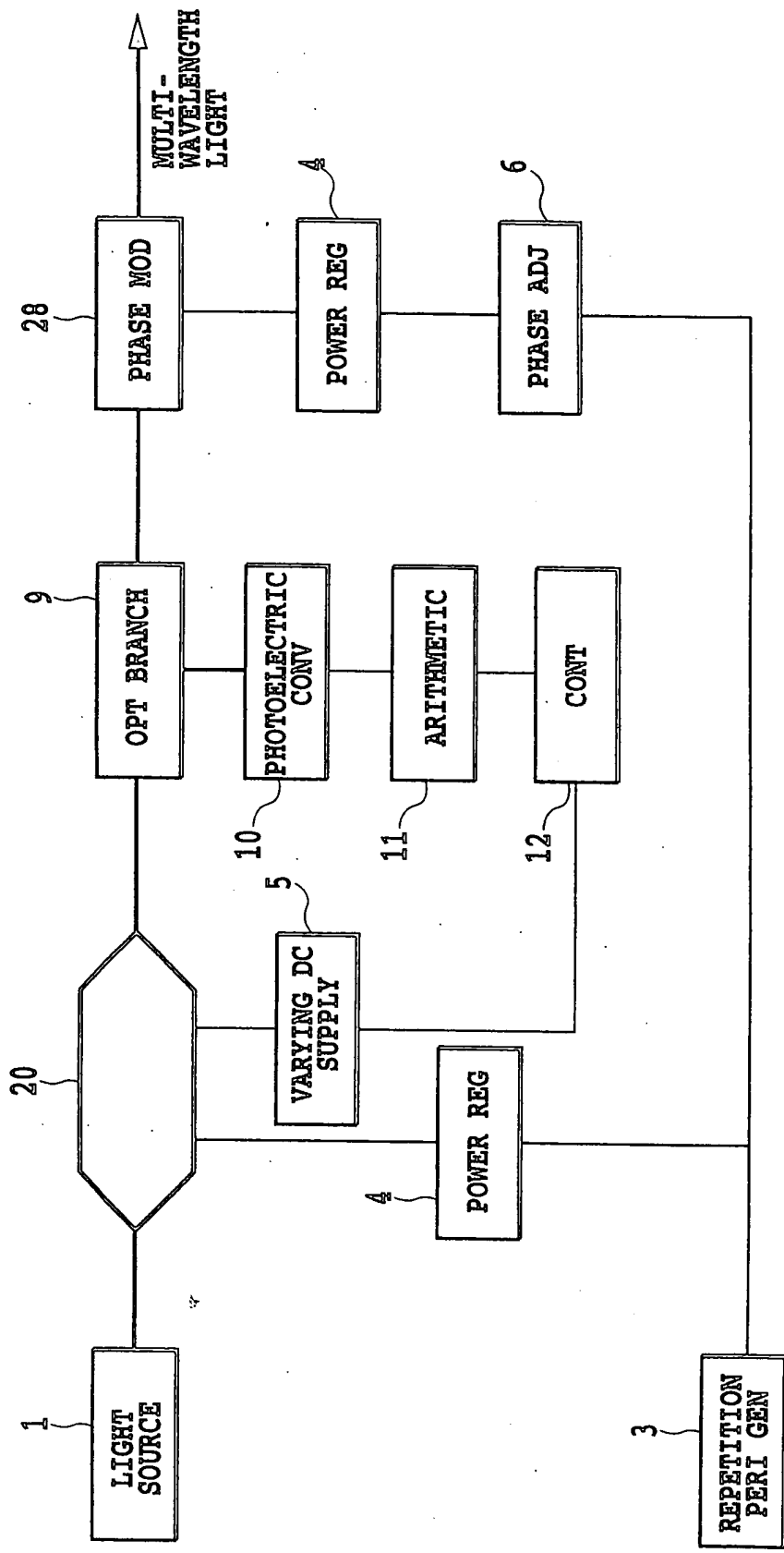


FIG. 43

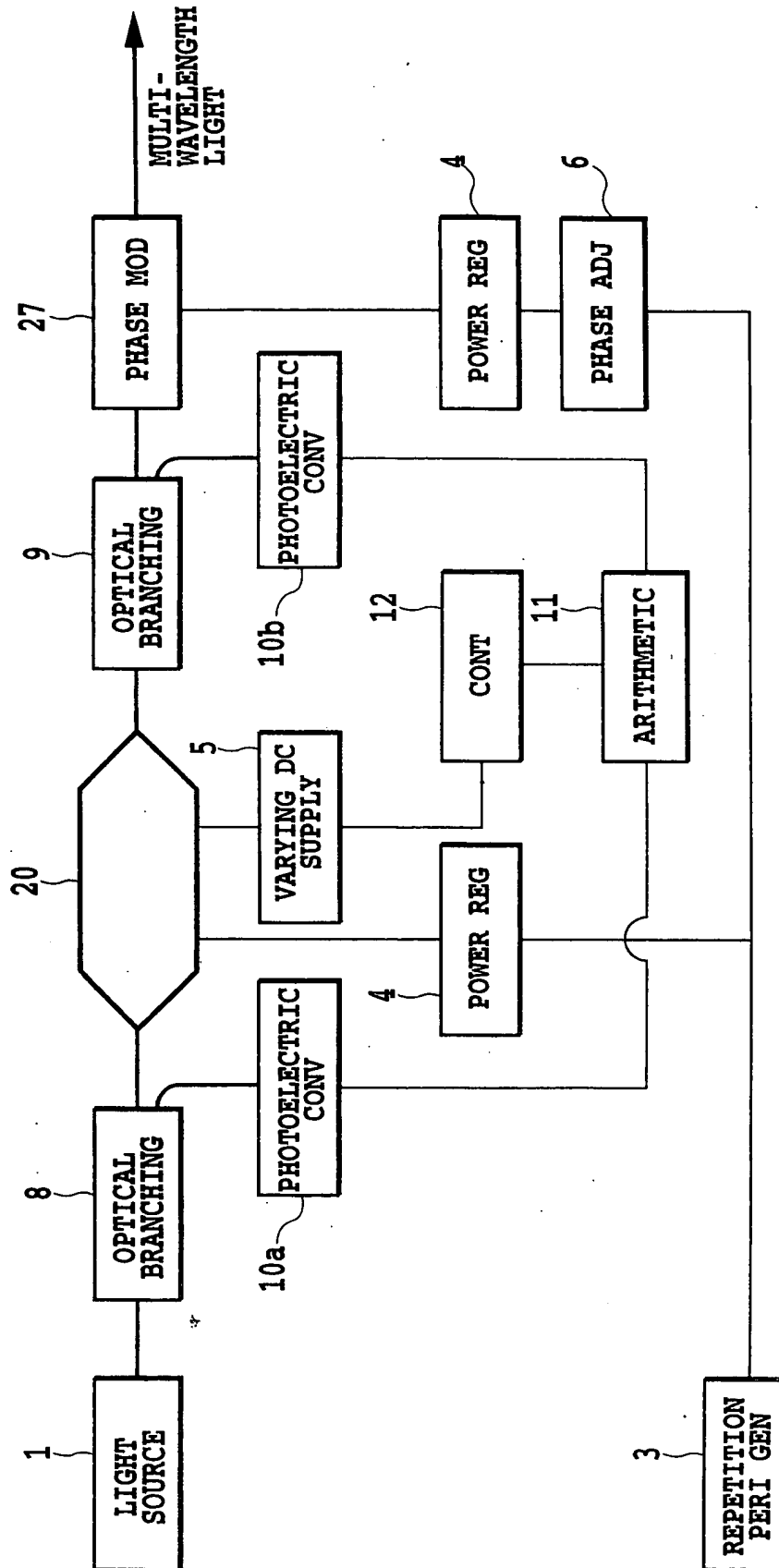


FIG.44

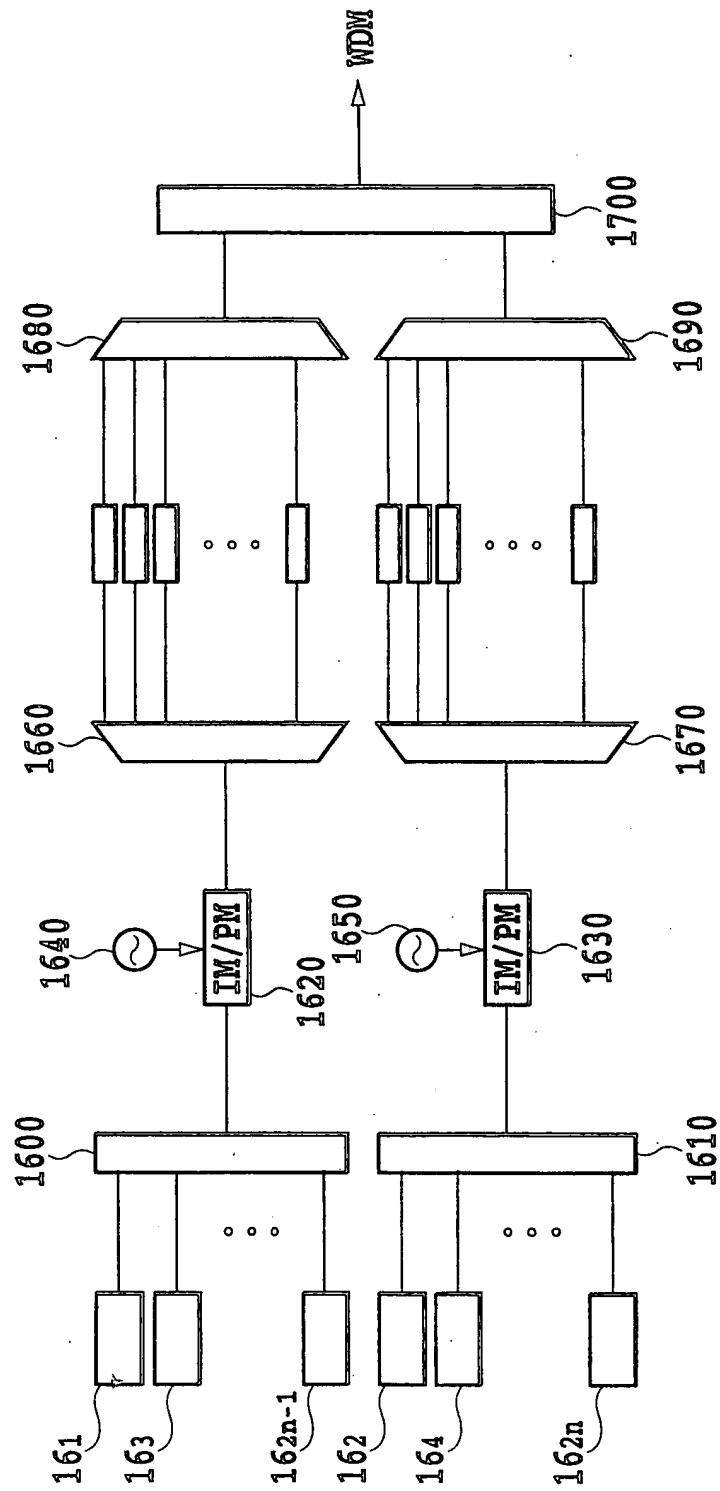


FIG. 45

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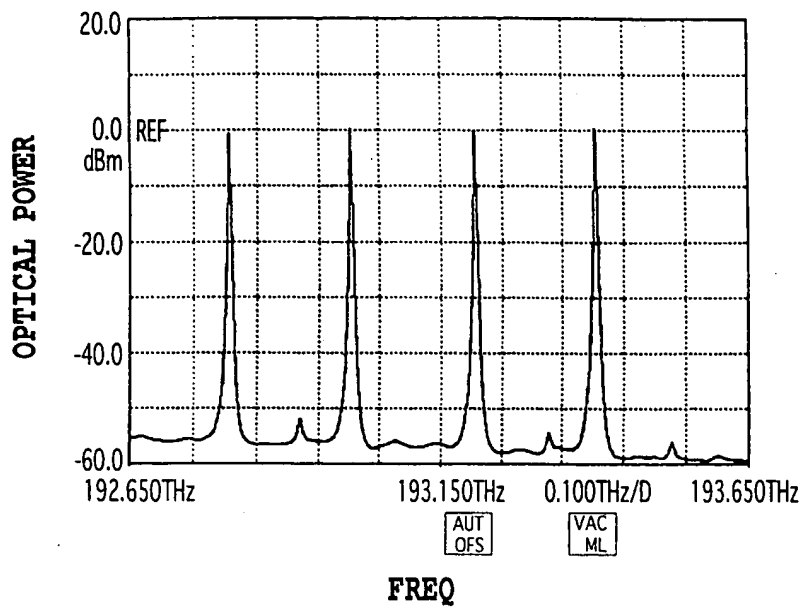


FIG.46A

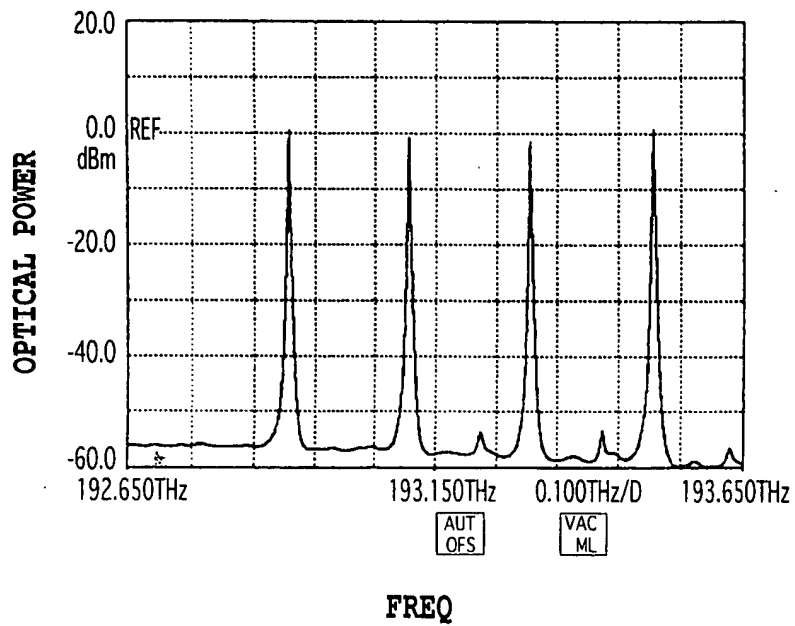


FIG.46B

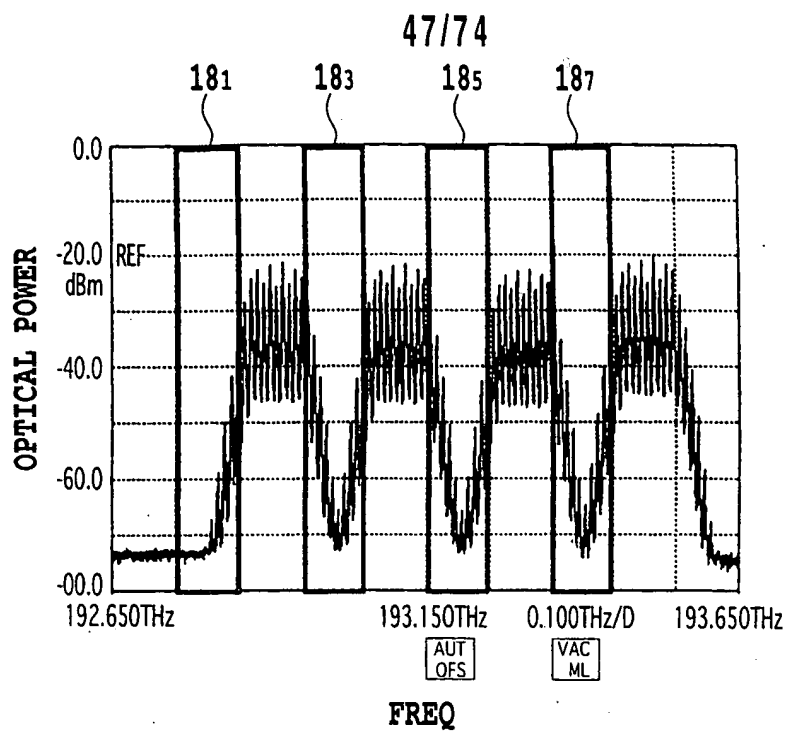


FIG.47A

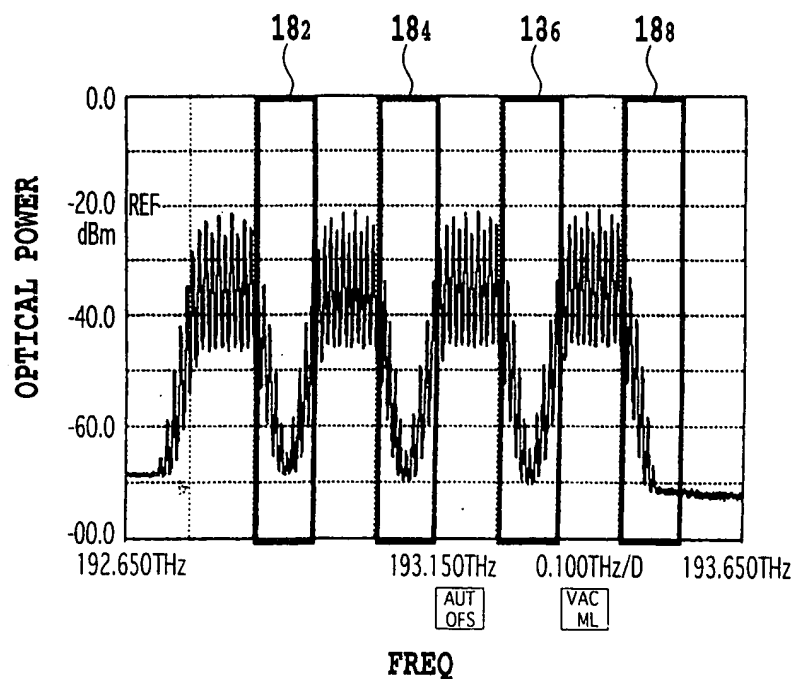


FIG.47B

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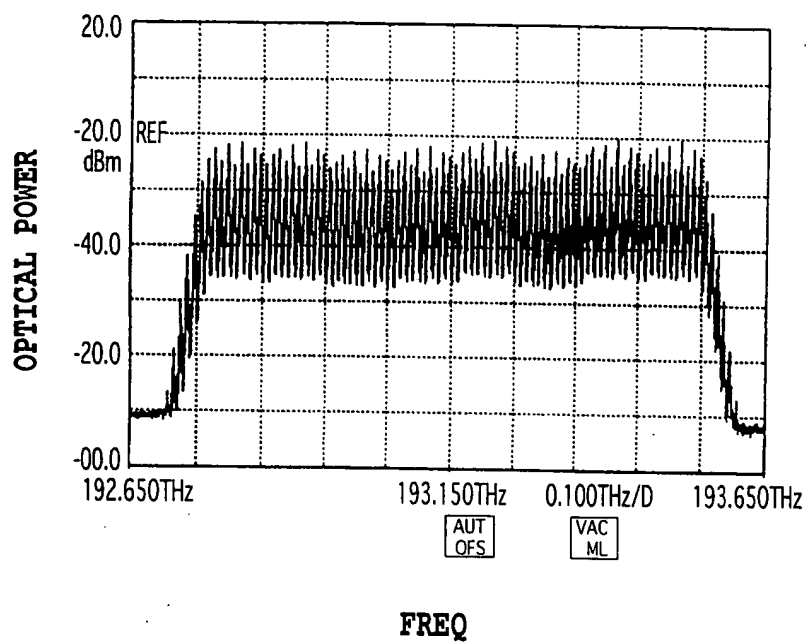


FIG.48

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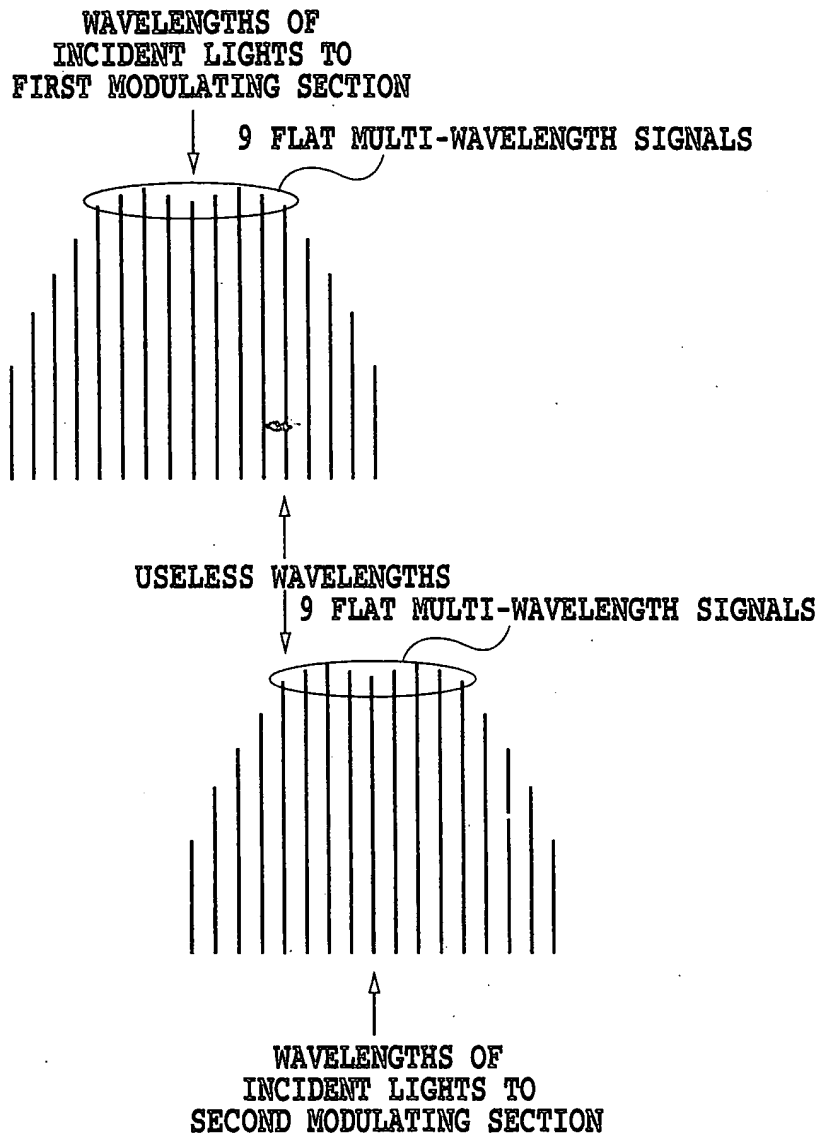


FIG.49A

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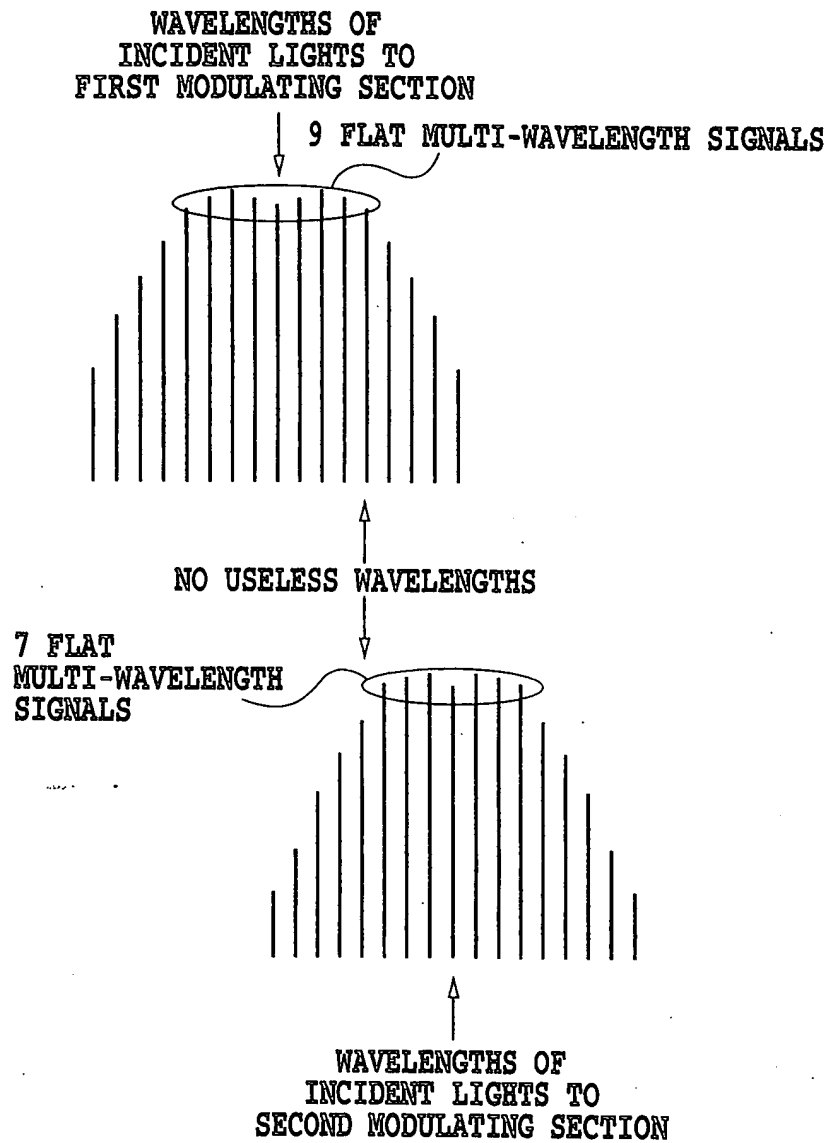


FIG.49B

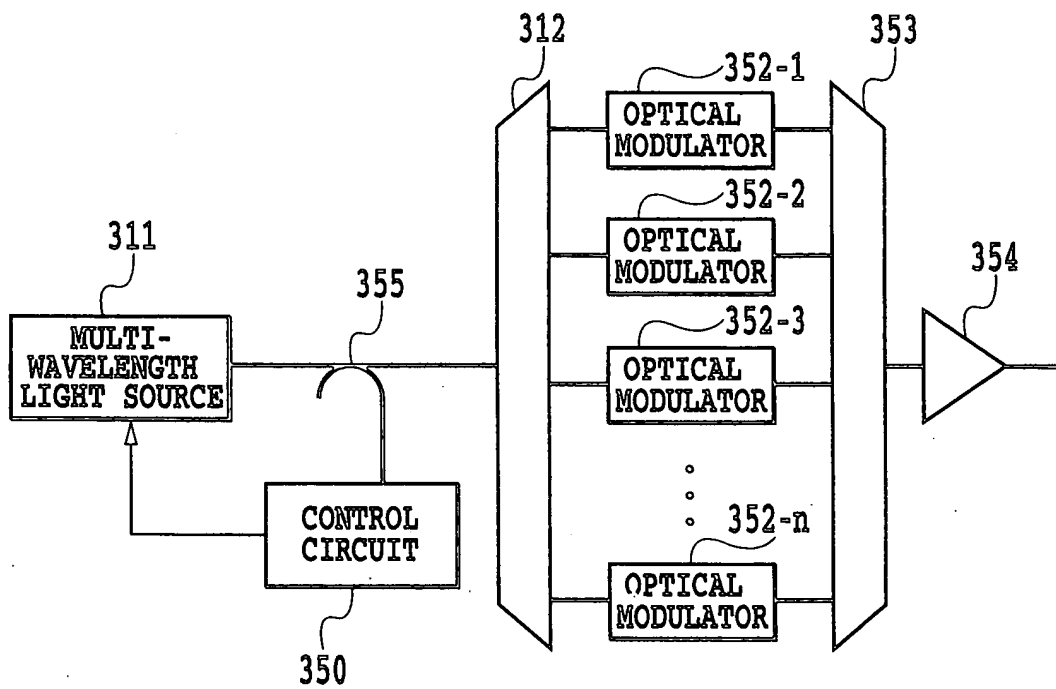


FIG. 50

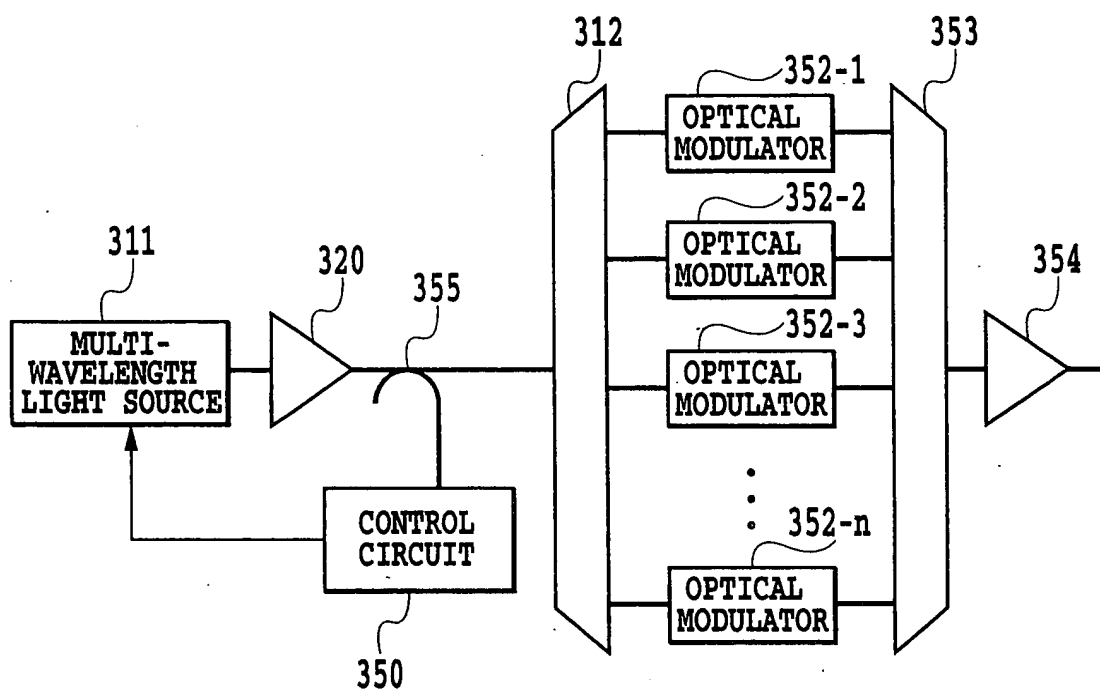


FIG.51

WAVELENGTH-MULTIPLEXED TRANSMISSION SYSTEM USING
COHERENT MULTI-WAVELENGTH SIGNAL GENERATING APPARATUS

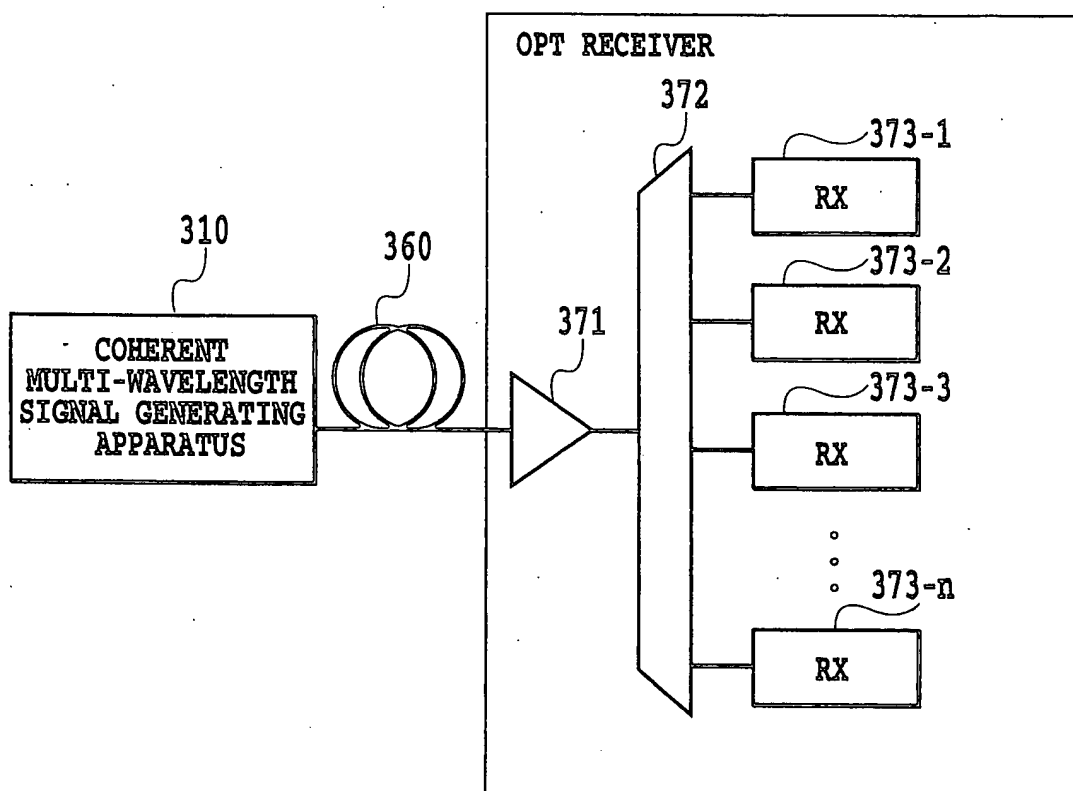


FIG.52

EXAMPLE OF FIRST CONFIGURATION OF
MULTI-WAVELENGTH LIGHT SOURCE

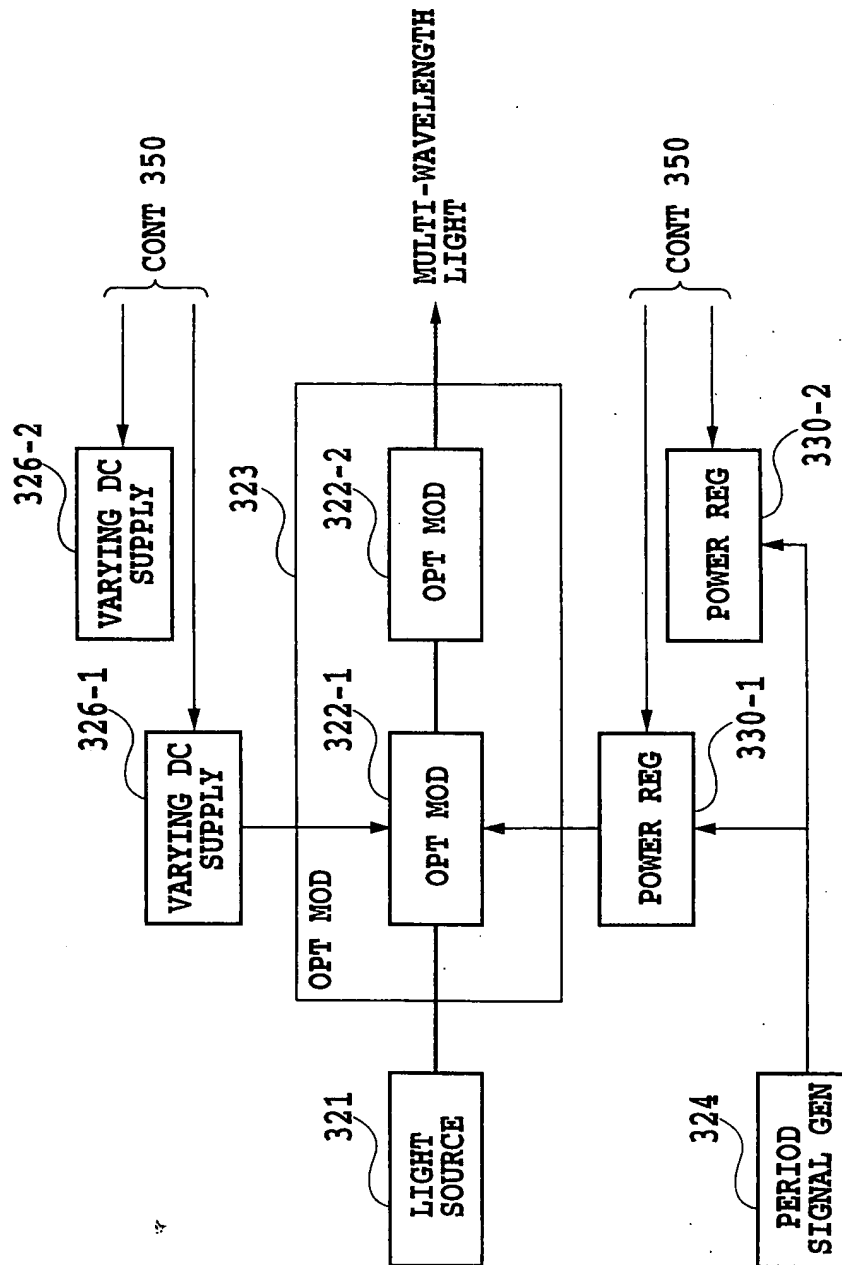
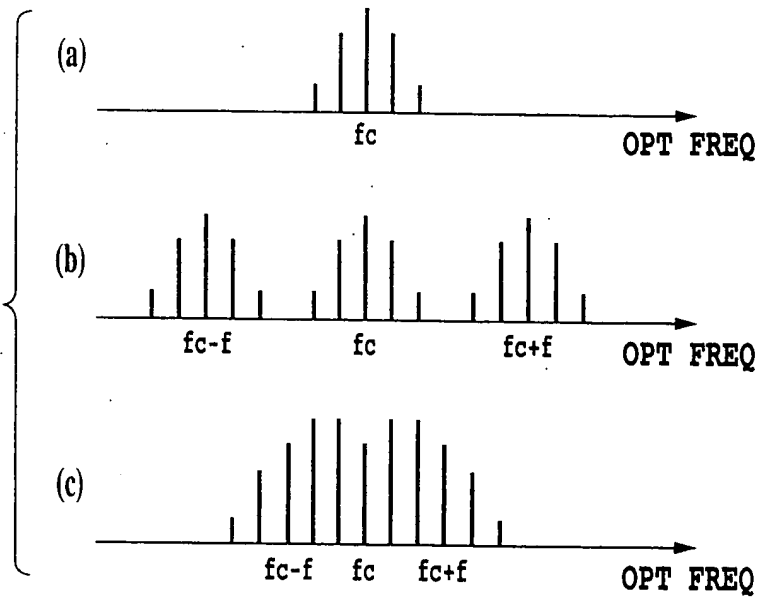


FIG.53

FIG. 53 PRINCIPLE OF GENERATION OF
MULTI-WAVELENGTH LIGHT FROM
MULTI-WAVELENGTH LIGHT SOURCE

FIG.54



SHAPE CONTROL OF OPTICAL SPECTRUM USING INTENSITY
AND PHASE MODULATORS AS OPTICAL MODULATING SECTION

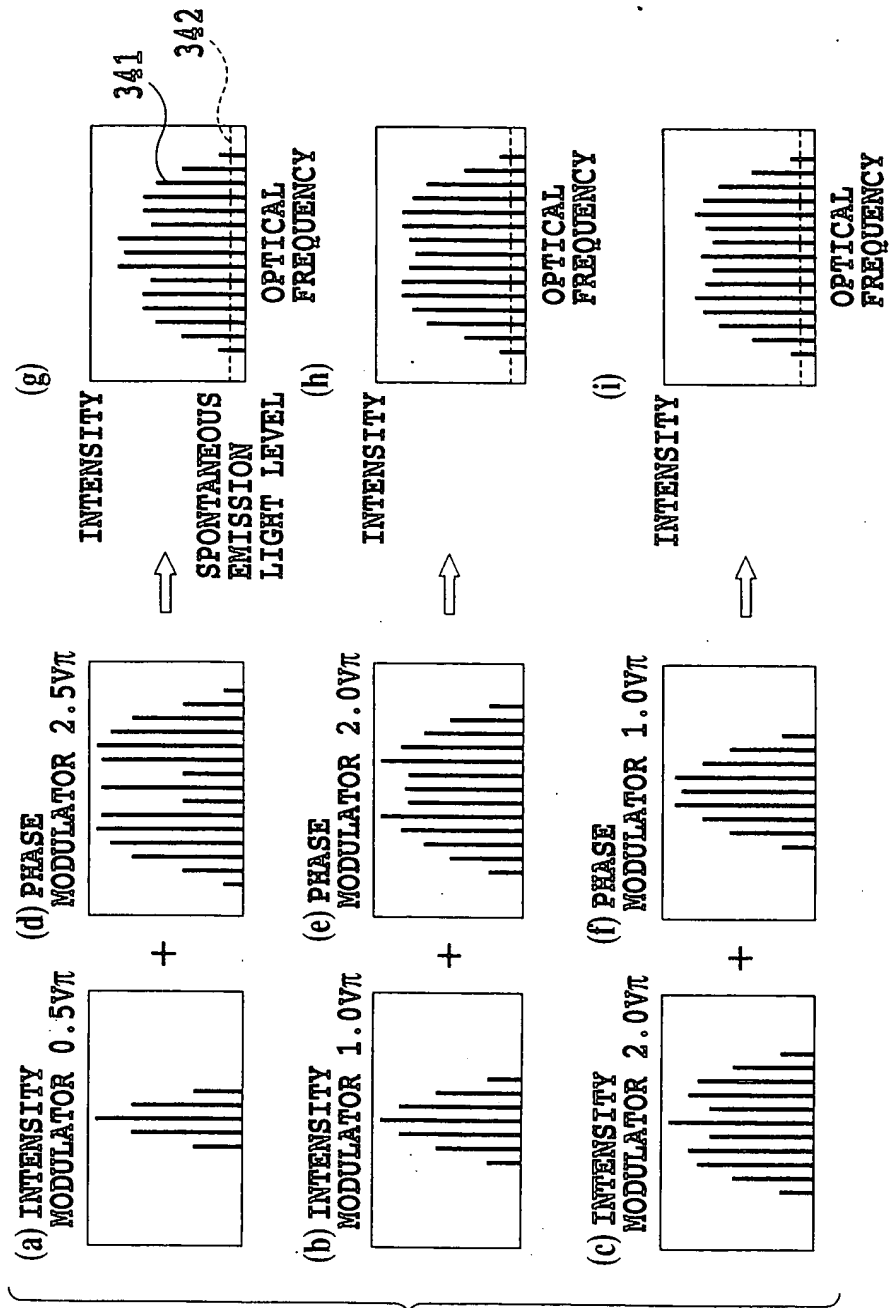


FIG. 55

OPTICAL SPECTRUM OF MULTI-WAVELENGTH
LIGHT AMPLIFIED BY OPTICAL AMPLIFIER

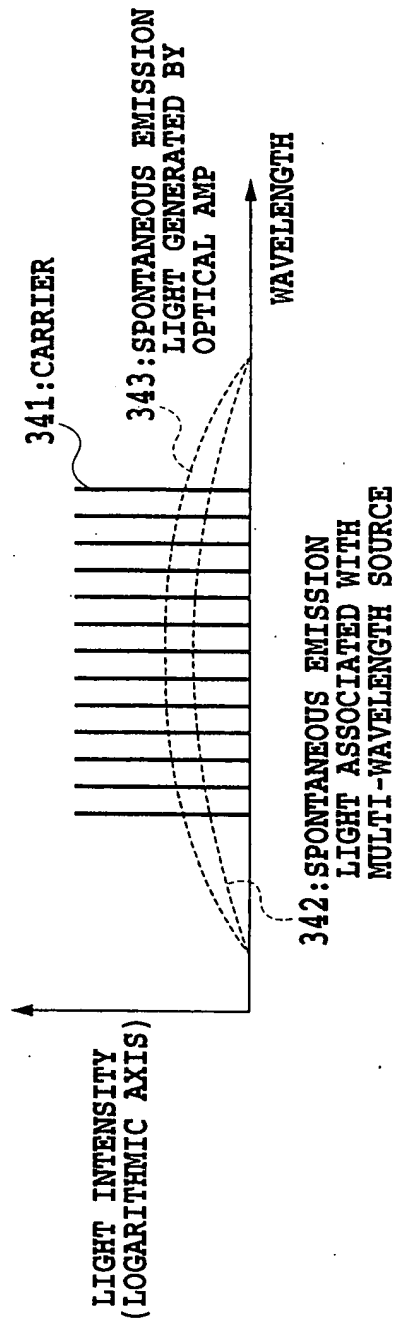


FIG.56

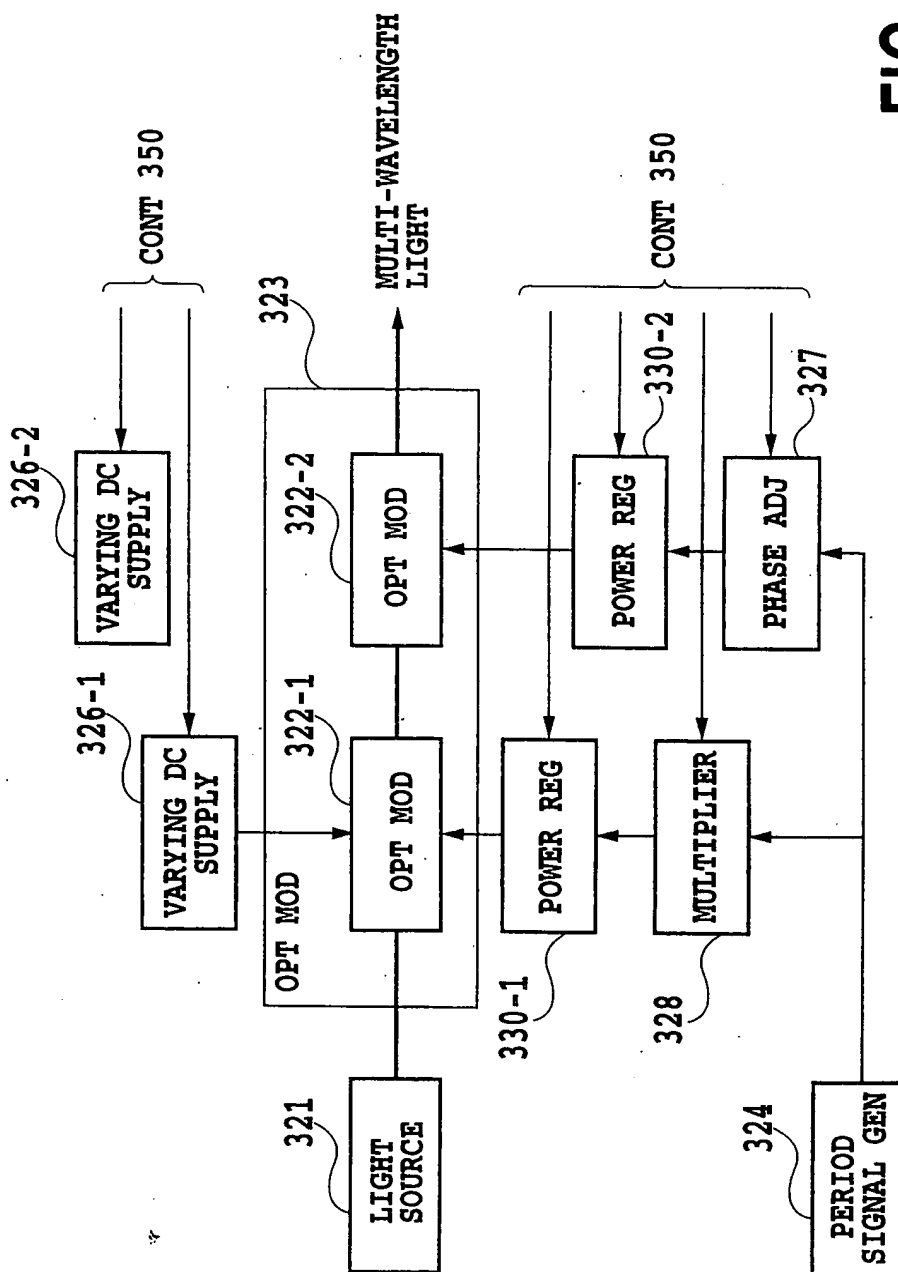
EXAMPLE OF SECOND CONFIGURATION OF
MULTI-WAVELENGTH LIGHT SOURCE

FIG.57

SHAPE CONTROL OF OPTICAL SPECTRUM
BY REGULATING PHASES OF PERIOD SIGNALS

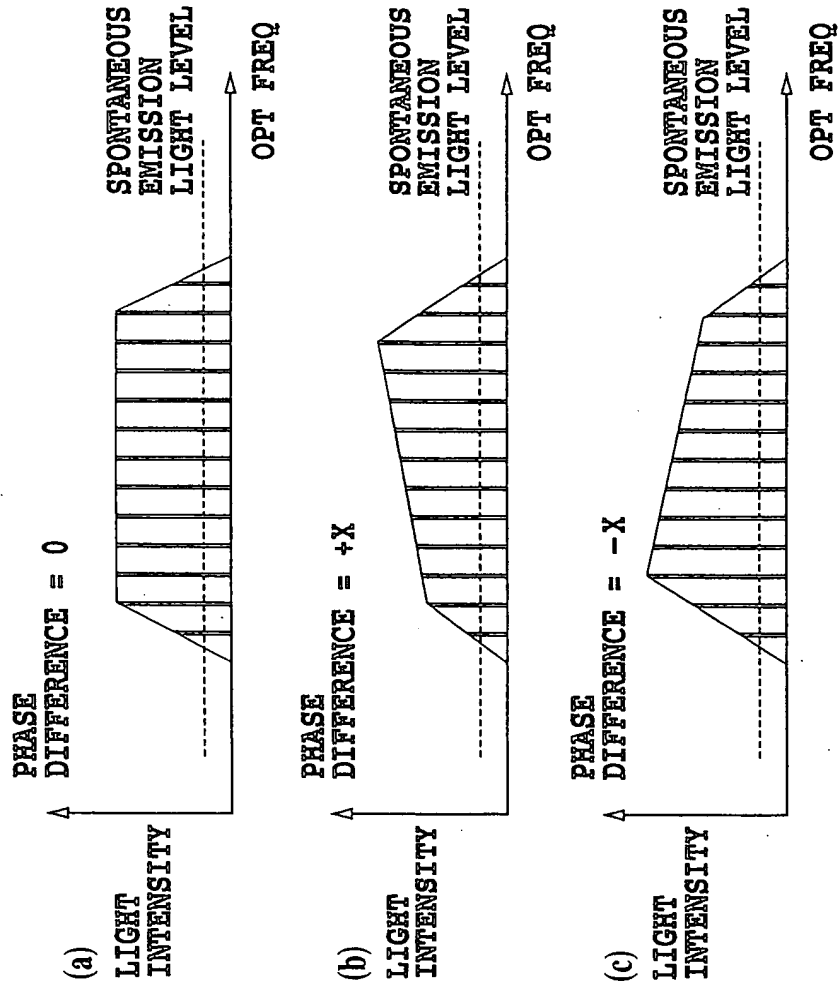


FIG. 58

SHAPE CONTROL OF OPTICAL SPECTRUM
BY REGULATING PERIOD SIGNALS

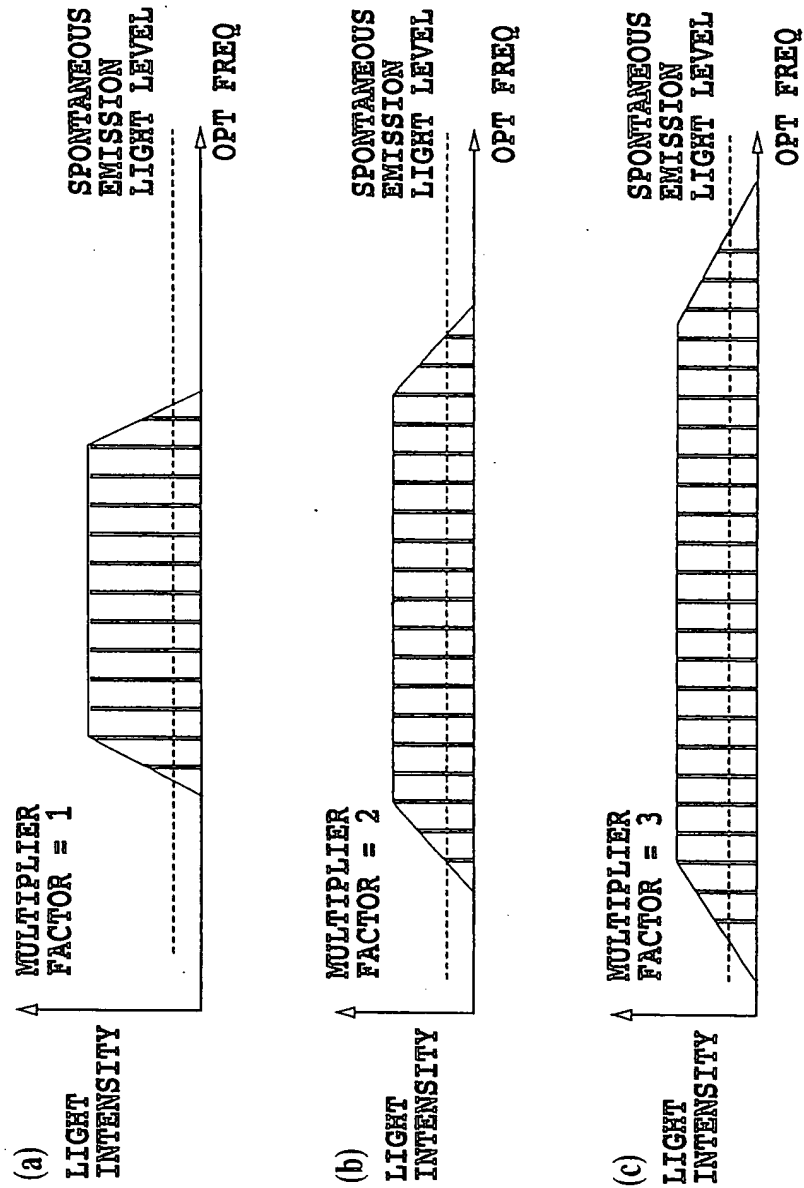


FIG. 59

EXAMPLE OF THIRD CONFIGURATION OF MULTI-WAVELENGTH LIGHT SOURCE

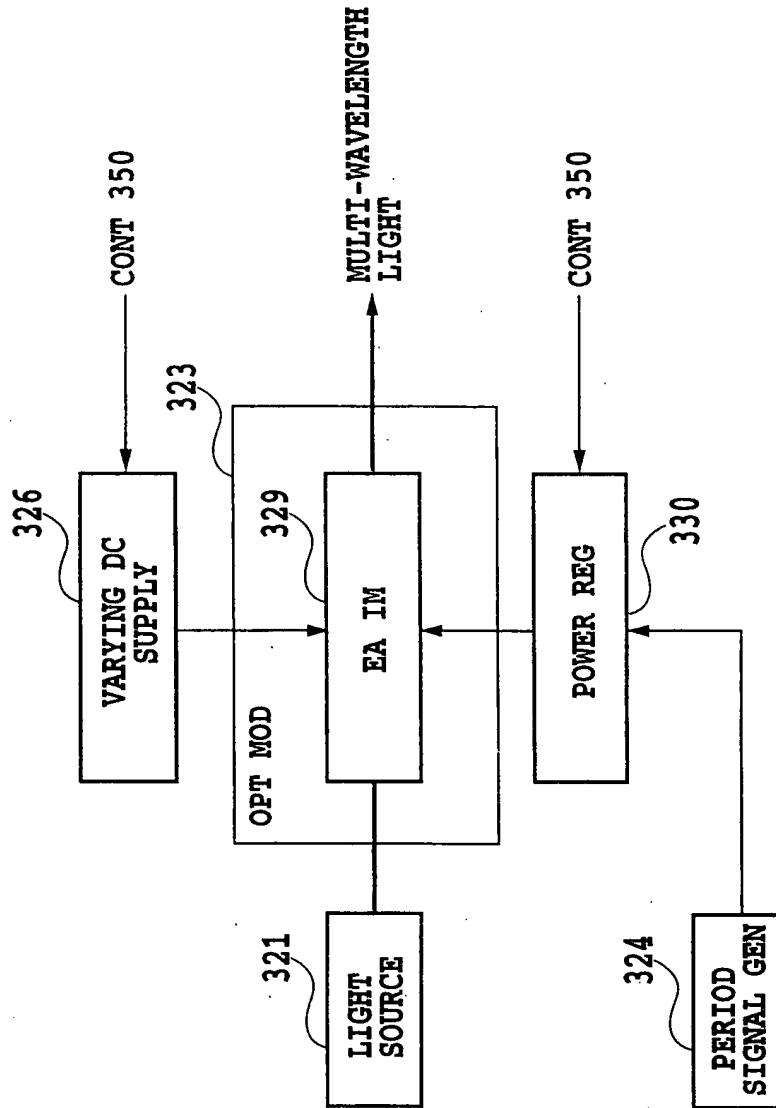


FIG. 60

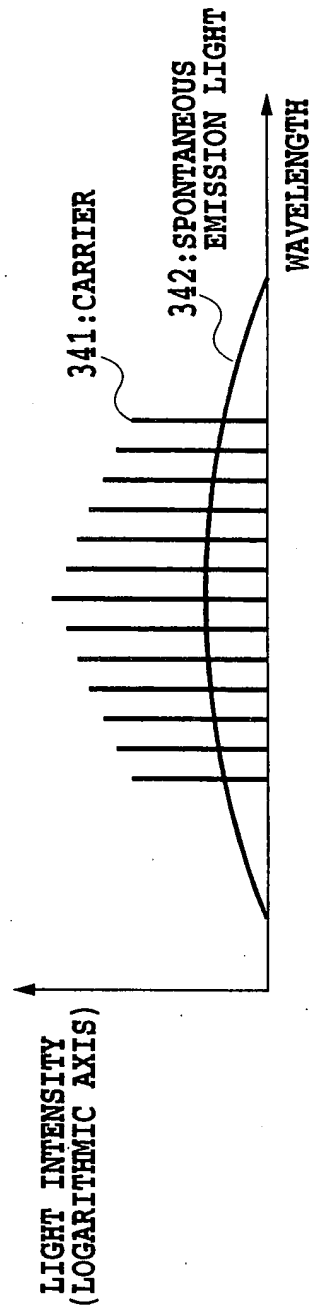


FIG. 61

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FOURTH EXAMPLE OF CONFIGURATION OF
MULTI-WAVELENGTH LIGHT SOURCE

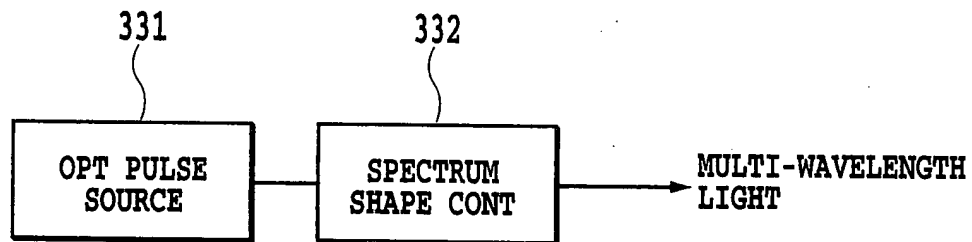


FIG.62

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PRINCIPLE OF ADIABATIC COMPRESSION
WITH DISPERSION REDUCING FIBER

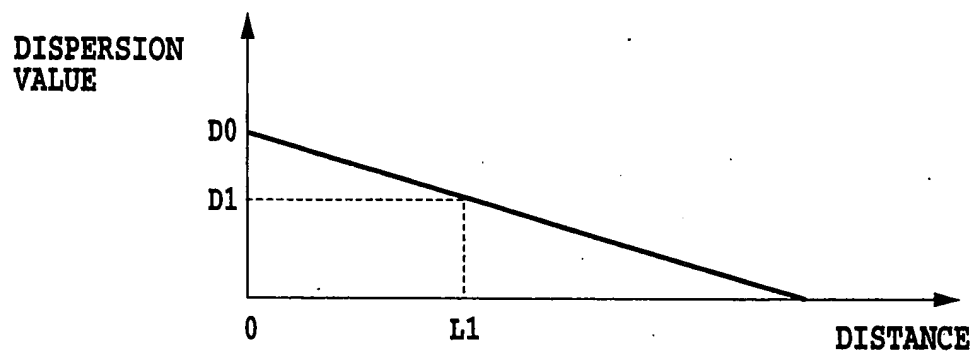
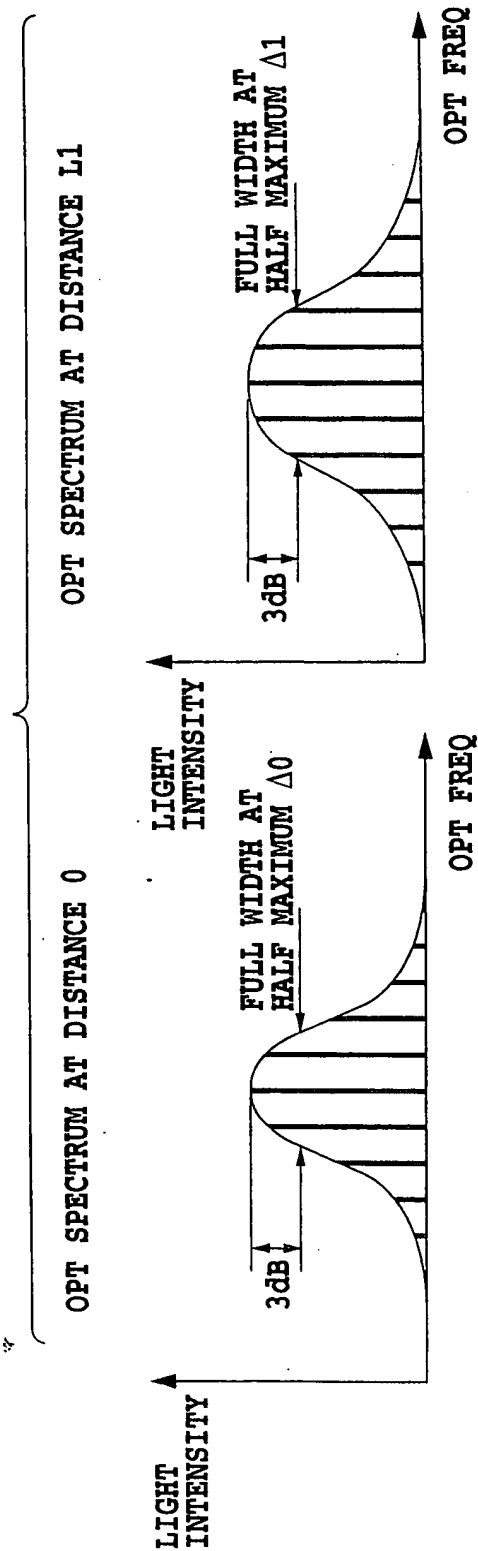


FIG.63A

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$$\Delta 1 / \Delta 0 = D 0 / D 1$$

FIG.63B

RELATIONSHIP BETWEEN OPTICAL SPECTRUM OF COHERENT
COMPONENTS OF MULTI-WAVELENGTH LIGHT AND
TRANSMISSION CHARACTERISTIC OF DEMULTIPLEXER

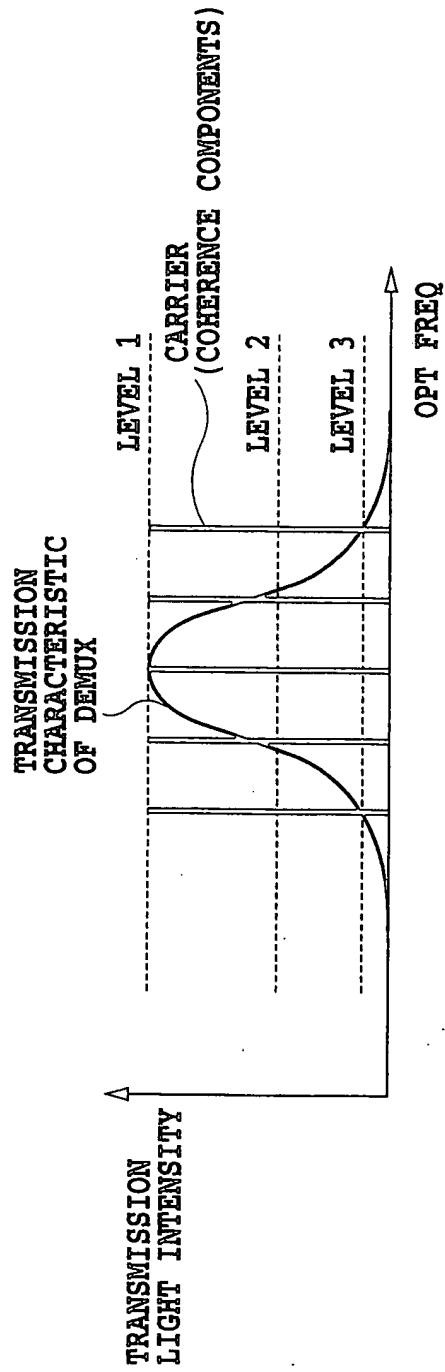


FIG.64

RELATIONSHIP BETWEEN STIMULATED EMISSION LIGHT AND
SPONTANEOUS EMISSION LIGHT FROM SEMICONDUCTOR LASER

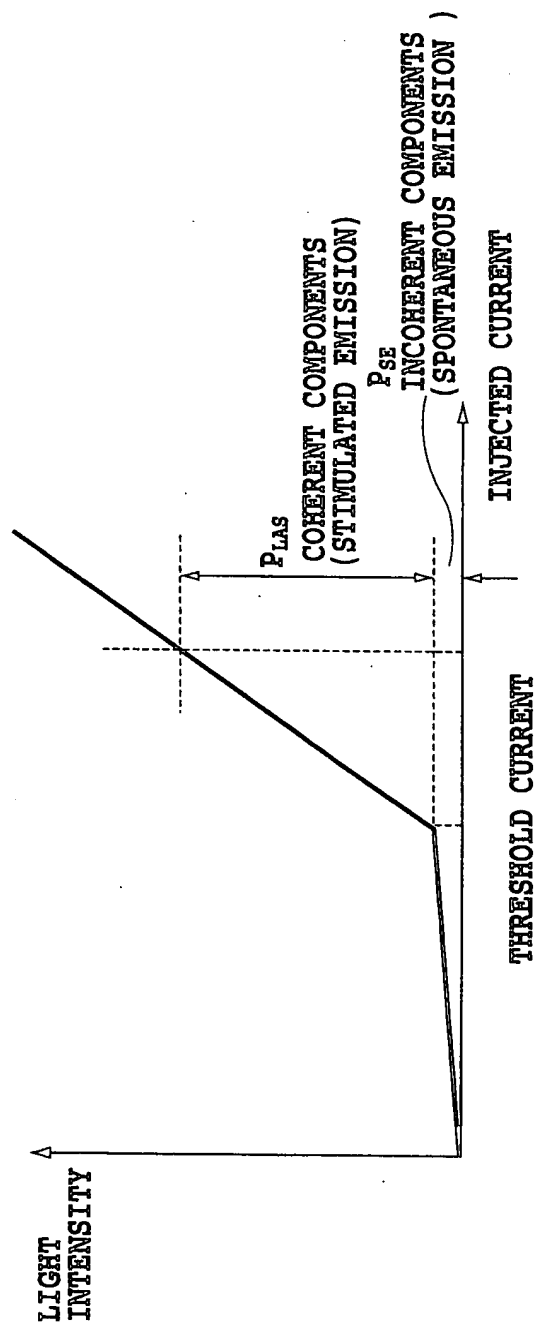


FIG.65

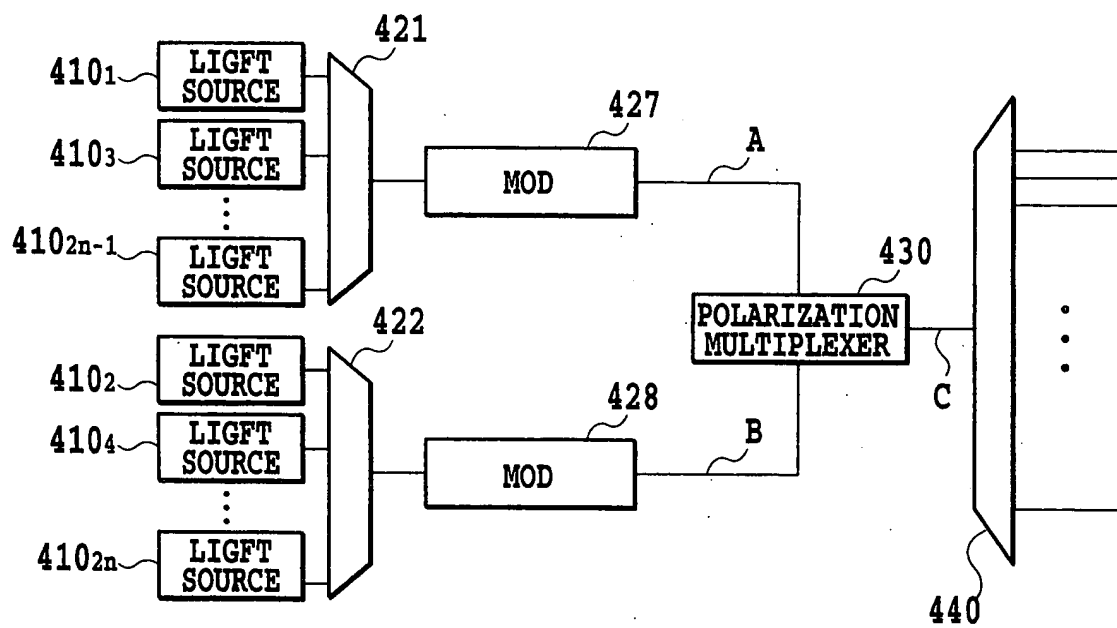
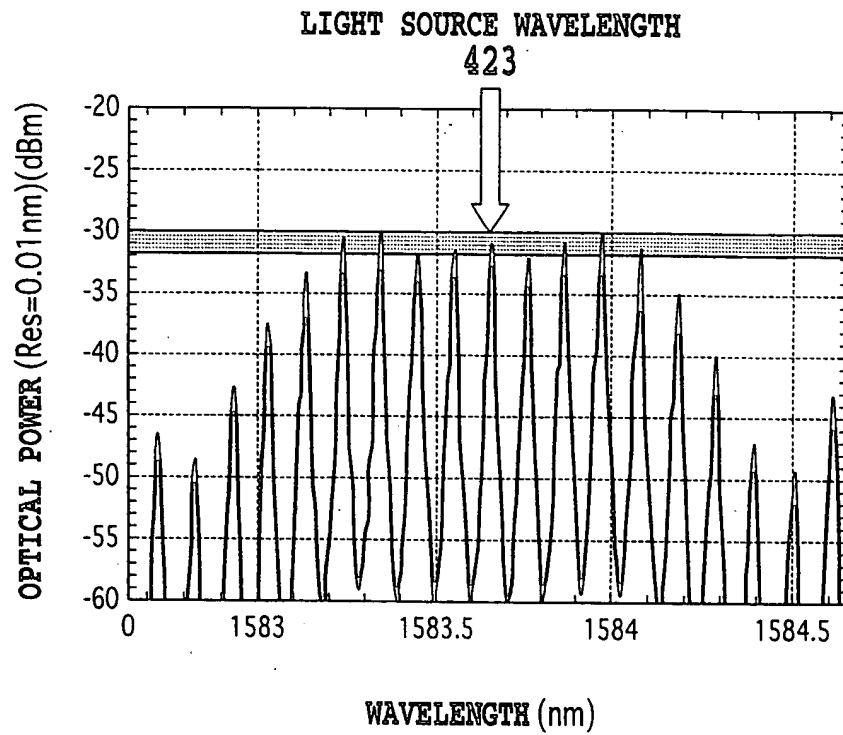


FIG.66

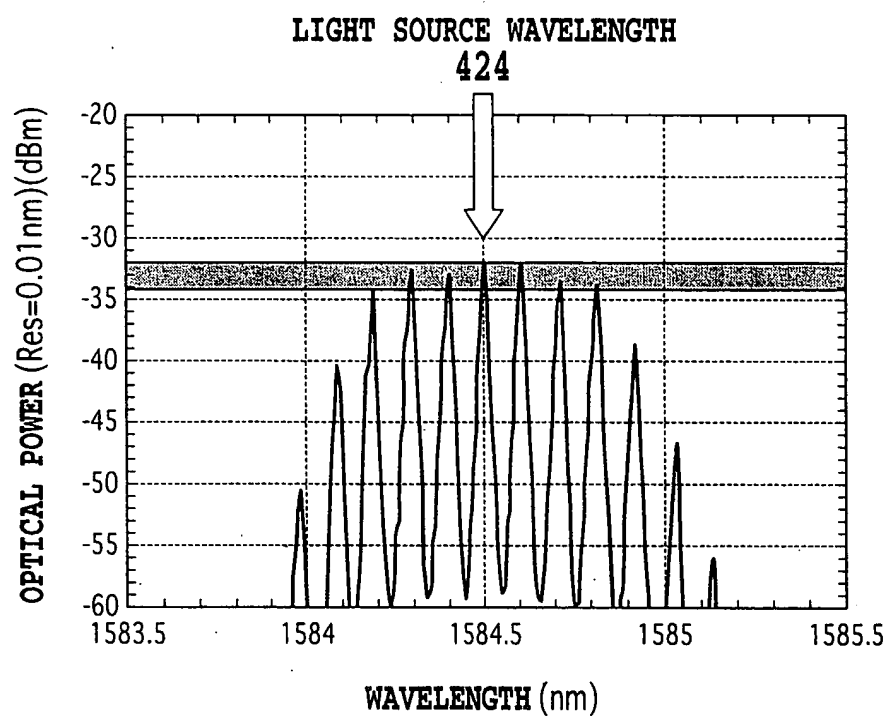
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ODD-NUMBER-TH LIGHT SOURCE WAVELENGTH AND SIDE MODES

FIG.67A

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EVEN-NUMBER-TH LIGHT SOURCE WAVELENGTH AND SIDE MODES

FIG.67B

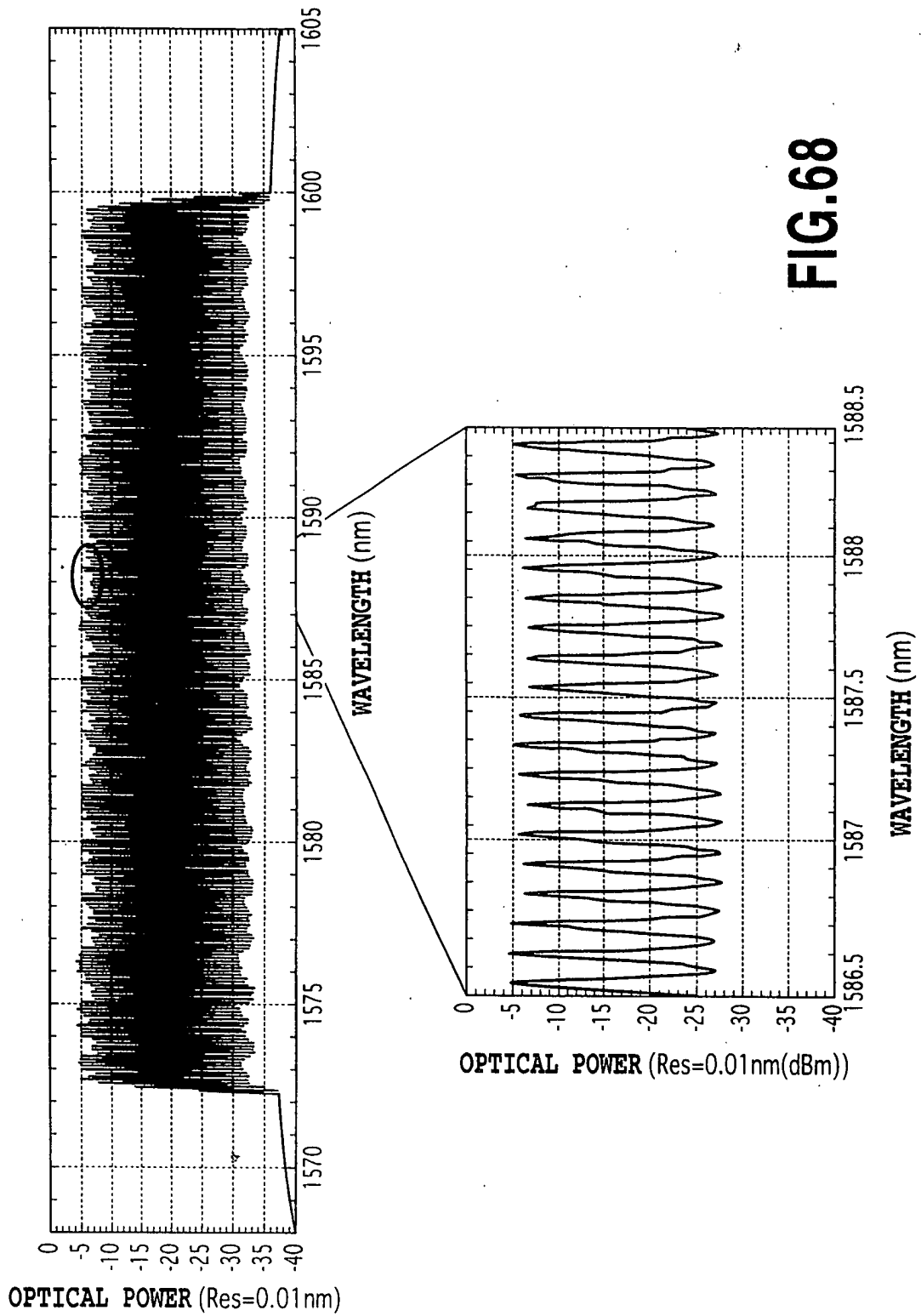


FIG.68

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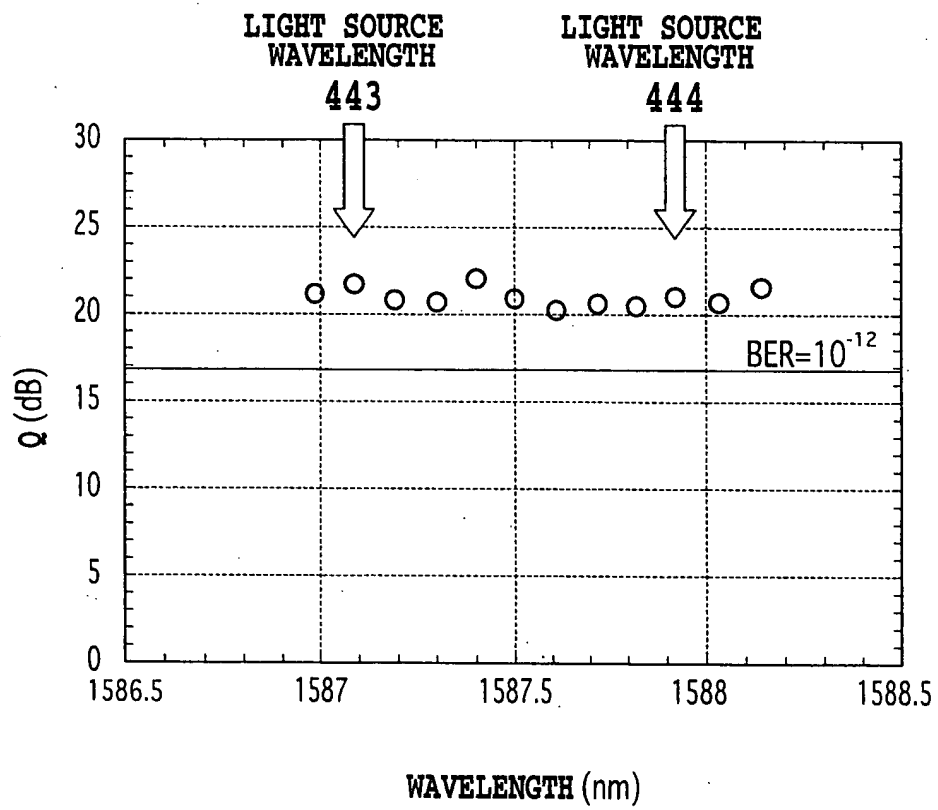


FIG.69

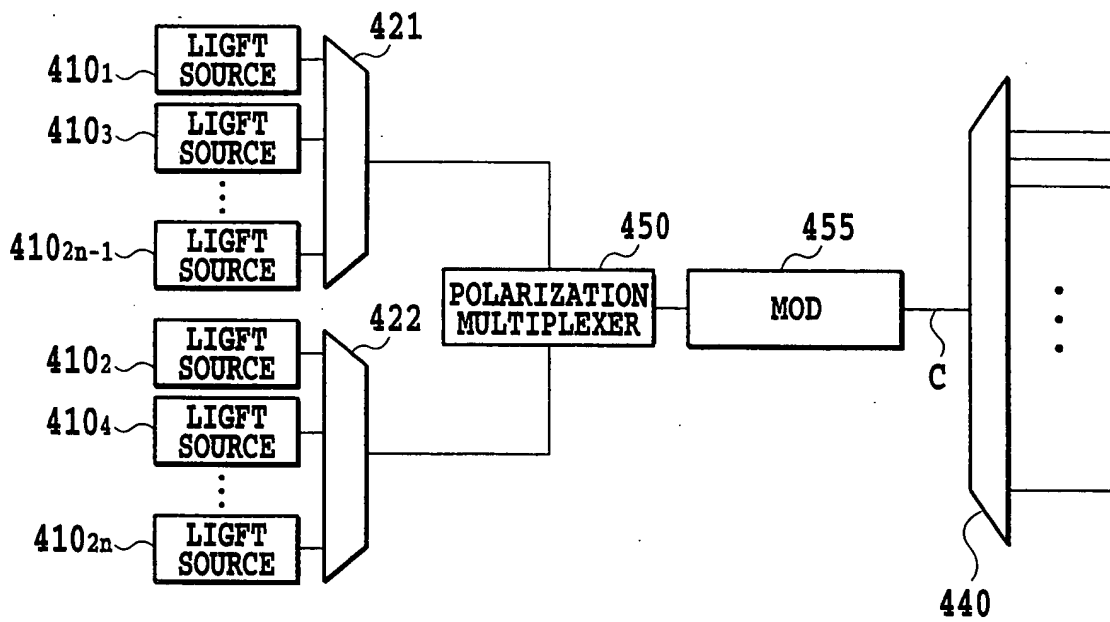


FIG.70

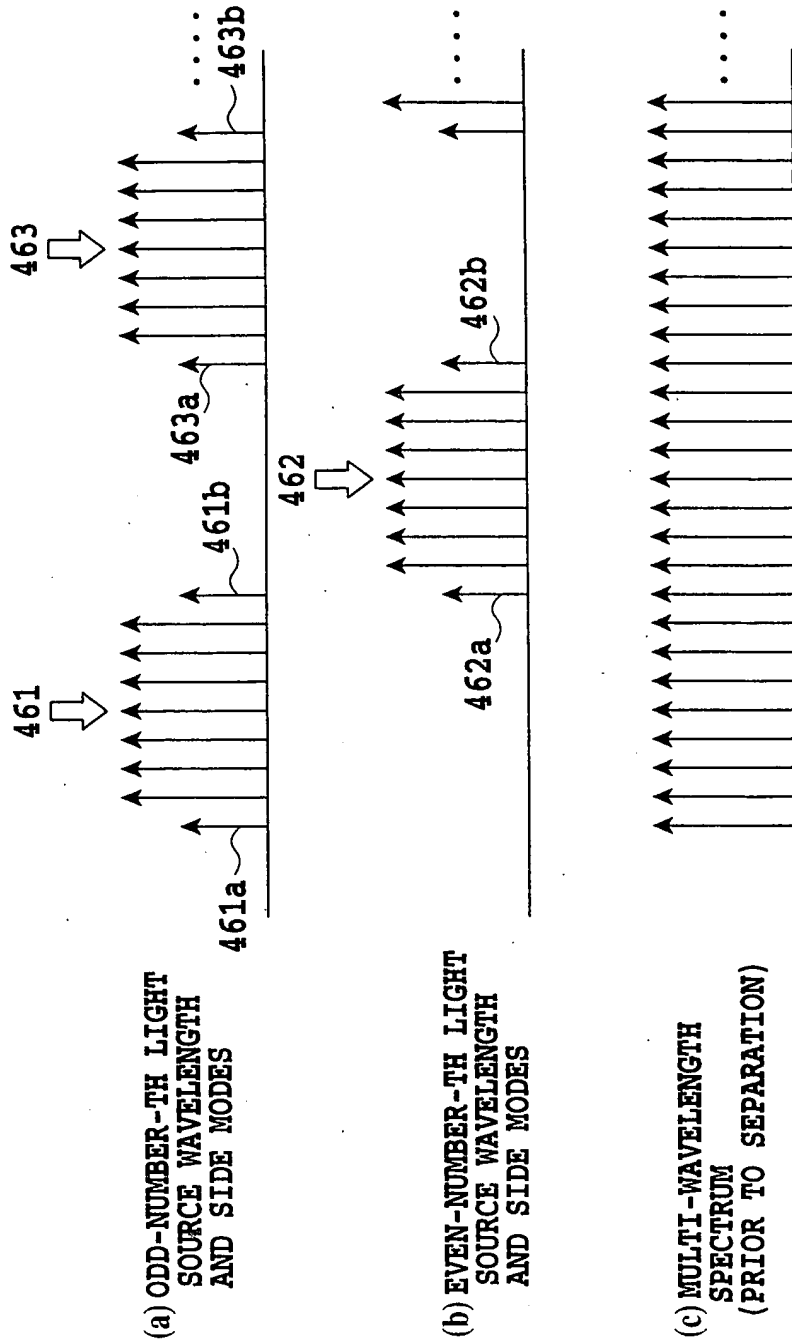


FIG.71